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ABSTRACT

In 1984, the California State Legislature enacted a mandatory enrollment fee and a new student financial aid program for California's community colleges. In 1986, a study was conducted to assess the fee's impact on student enrollments; ethnic and income distributions of students; distributions of full- and part-time students; changes in staffing requirements and administrative costs; the availability of federal, state, and other sources of financial aid to community college districts; and the administration and distribution of state financial aid. Study findings included the following: (1) the fee contributed to the 7% enrollment loss in 1984, a loss nearly twice that of community colleges across the country; (2) blacks were affected by the fee to a greater extent than other racial or ethnic groups, as evidenced by a 1984 enrollment decline of 18%; (3) enrollment losses were greatest in districts where residents reported the lowest household incomes; (4) on average, each college added 0.6 full-time equivalent staff to help administer the new fee; and (5) estimated costs of administering the fee were higher than the portion of the revenues allocated for this purpose. Appendixes provide data on the impact of the fee in relation to ethnic distribution of students, national enrollment trends and fees, distinct changes, student socioeconomics, and fee administration. (LAL)

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# STUDY OF FEE IMPACT: PROGRESS REPORT

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# STUDY OF FEE IMPACT:
# PROGRESS REPORT

CALIFORNIA
COMMUNITY
COLLEGES

Research and Analysis Unit
Chancellor's Office
December 1986

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## Preface

While California community colleges had established many student fees for specific services during the 1960s and 1970s, it wasn't until 1984 that all students were charged a fee for enrollment in credit classes. Legislation that year created such a fee and established a financial aid grant program to be administered by the state Board of Governors in order that low income students not be denied access. Emphasizing their concern about student access, the Legislature also requested a study of the impact of the fee and financial aid. This report presents the results of that study.

Isolating the effect of fees and other student costs on enrollment is not an easy task. Numerous factors interact to determine the level of community college enrollment, including the quantity and scheduling of courses and supporting services which, in turn, are determined by fiscal and academic policies. Changing trends in the state's economy and demography, together with changes in student preferences, also play an important part in shaping student enrollment demand as do the costs of college-going. Drawing from a number of data sources, we have attempted to sort out the causal factors in recent enrollment trends, focusing -- as requested -- on those factors operative in 1984, the first year of the new fee.

This study was conducted by staff of the Research and Analysis Unit under the direction of Chuck McIntyre. Questions and comments about the work should be directed to the Research and Analysis Unit. We are grateful for the help of an advisory committee that assisted both in the study design and in the interpretation of findings. In addition, surveys by the Field Research Corporation, particularly work by Eleanor Murray, proved to be of invaluable assistance.

The existing fee and financial aid statutes expire at the end of calendar 1987. This spring, the Legislature, together with executive branch, Board of Governors, and institutional policymakers must consider and adopt policies that are to be put into place beginning in 1988. This report provides valuable background information on our recent experience that should facilitate the upcoming policy discussion.

JOSHUA L. SMITH
Chancellor

Sacramento
December 1986

# STUDY OF FEE IMPACT
# PROGRESS REPORT

## Summary

In AB 1XX (1984), the Legislature enacted a mandatory enrollment fee and a new student financial aid program for California community college students and required the Chancellor of the community colleges to study the fee's impact. This study was to focus on seven questions and be conducted in consultation with the California Postsecondary Education Commission and with the assistance of an advisory committee.

A progress report on the study is to be submitted to the Legislature by January 1, 1987, and a final report is due by July 1, 1987. The fee and financial aid are authorized until January 1, 1988. The timing of future policy discussions on the topic of community college student fees and financial aid suggests that policy recommendations will need to be considered prior to the time the final report is due in July 1987.

This progress report responds to the seven questions asked by the Legislature. The report's contents may be summarized briefly as follows.

Credit enrollment in California community colleges declined by 7% in 1984. This was the third consecutive year of enrollment losses since the colleges recorded their peak of 1,430,000 students in 1981. Budget and program cuts are thought to have been the primary reasons for 6% and 8% declines in 1982 and 1983. For 1984, however, there was a budget increase for inflation and enrollment growth and incentives in the funding mechanism to restore enrollment losses that had taken place in 1983. Reacting to these budget incentives, colleges attempted to grow, increasing their number of course sections by 4% over 1983. Despite this effort at growth, credit enrollments declined.

Results of this study indicate that the new enrollment fee did contribute, along with several other factors, to the 1984 enrollment loss. The Board's new student financial aid program did not compensate to any significant degree for the fee in 1984. Low income students, Black students, and part-time students taking six to eleven units were the most affected.

California's enrollment loss in 1984 was nearly twice the loss which took place in community colleges across the country that same year. Since other factors that impact upon enrollment were changing in a similar way elsewhere, the larger losses in California, particularly among part-time students, appear attributable to the impact of the new enrollment fee.

Few of the effects reported for 1984 in California continued into 1985, the second year of the fee. Credit enrollment stabilized and there was a slight return of low income students which may be due to the large second year increase in financial aid. Preliminary data indicate that credit enrollment may have increased in fall 1986. Thus, the new enrollment fee appears to have had a significant first-year impact, which was ameliorated in the second year.

Current policies on student fees and financial aid, embodied in AB 1XX, expire on January 1, 1988 -- the middle of the 1987-88 academic and fiscal year. Given the need of students and institutions to plan with some certainty, there should be early consideration of the policies that are to replace AB 1XX in 1988.

## Background

*Timing and Content of Required Study*

In AB 1XX (1984), the California Legislature enacted a mandatory enrollment fee and a new state-supported financial aid program for community college students and declared the Legislature's intent "...to ensure that the imposition of a mandatory fee does not impair access to, or the quality of, California community colleges."

To help achieve this, the Chancellor of the community colleges was required to study the fee's impact upon all of the following:

1) Student enrollments.

2) Ethnic distribution of students.

3) Income distribution of students.

4) The distribution of full-time and part-time students.

5) Changes in the staffing requirements and the costs of administration.

6) The availability of federal, state, and other sources of financial aid to community college districts.

7) The administration and distribution of the financial aid in this act by the Chancellor's Office and at the district level.

Under the provisions of AB 1XX, the Chancellor was to conduct this study in consultation with the California Postsecondary Education Commission (CPEC) and with the assistance of an advisory committee. Findings and recommendations of this study were to be submitted in a progress report to the Joint Legislative Budget Committee and to CPEC by January 1, 1987. A final report is due by July 1, 1987. CPEC is to submit written comments and recommendations on both reports to the Legislature. (See Appendix A.)

Work on the study has been underway since the spring 1984, the term just prior to the fee's imposition. Surveys (spring 1984, spring 1985, and spring 1986) of three stratified random samples of community college students have been conducted by the Field Research Corporation (FRC) to help identify differences in student characteristics before and after the fee. Staff also have worked with numerous other sources of information, including the available literature on fees, national data on community colleges, local California studies, and data on California community college district enrollments, fees, and other relevant factors.

The advisory committee (see membership in Appendix A) has met throughout the study, participating in the research design as well as in the interpretation of findings. Responsibility for the findings and conclusions of this report rests with the Chancellor's Office, however.

Staff reported to the Board in January 1986 regarding preliminary findings about the fee's impact and about the factors generally affecting enrollment trends (Chancellor's Office, 1986b).

Findings from a preliminary draft of this progress report were discussed with the Board in October 1986 (Chancellor's Office, 1986d).

The mandatory enrollment fee and Board Financial Assistance Program (BFAP) are authorized until January 1988. Unless the fee's sunset date is extended, the Legislature must deal with the issue during its Spring 1987 session so as to resolve the fee and the role its revenues are to play in support of 1987-88 community college budgets. The Master Plan Review Commission is scheduled to report its recommendations on student fees in the three public segments of higher education by March 1987. It appears that the final report on July 1, 1987, will be too late for the policy debate. Thus, the Chancellor's and Board's policy recommendations, if they are to play a part in the legislative debate on this subject, must be submitted earlier in 1987. To accomplish this, the Board reviewed a report on possible fee and financial aid policy alternatives at its December 1986 meeting (Chancellor's Office, 1986a). The Board expressed support for a series of tentative policy recommendations developed by staff.

*Policy Prior to 1984*

The Organic Statutes, creating the University of California in 1867, established the principle that California residents should not pay tuition, interpreted in recent years as charges to students for the costs of their instruction. In 1960, the Master Plan Survey Team reaffirmed this principle for all three segments of California public higher education, including community colleges, but added that students should assume greater responsibility for their education by paying fees for services other than instruction. These services were distinguished between (a) "ancillary," such as housing, food and parking -- to be supported by their users -- and (b) "program related," such as health, athletics, and activities -- to be supported by all students.

Over the next two decades, the California community colleges were authorized by the Legislature to charge students a number of user fees which were "permissive," that is, could be charged at the discretion of each district. Besides nonresident tuition and fees for instruction in community services and certain adult education classes, the list of authorized user fees for various services had grown to nearly twenty in number by 1982. These fees included charges for health, parking, field trips, instructional materials and student records, among others.

Responding to a legislative request, ACR 81 in 1982, CPEC proposed a series of guidelines for fees and financial aid in California public postsecondary education. For community colleges, CPEC recommended that there be generally low fees, no charges for those courses with the highest state priority, and that courses taught for avocational, recreational and personal enrichment purposes be self-supported through fees. This recommendation was adopted by the Legislature and $30 million of state support for such courses was withdrawn beginning in 1982-83. Some of these courses were eliminated while others became fee supported.

Another CPEC recommendation in its response to ACR 81 (1982) requested the Board of Governors to prepare a contingency fee plan with procedures to institute mandatory student charges and to distribute related student financial aid. After extensive study and public hearings, the Board responded in December 1982 with a plan that addressed the question of fees and access from two perspectives. First, the Board declared its opposition to across-the-board tuition and fees, commenting on preferred access priorities. Second, the Board recommended certain short-term conditions designed to minimize the negative impact on access of possible fee proposals.

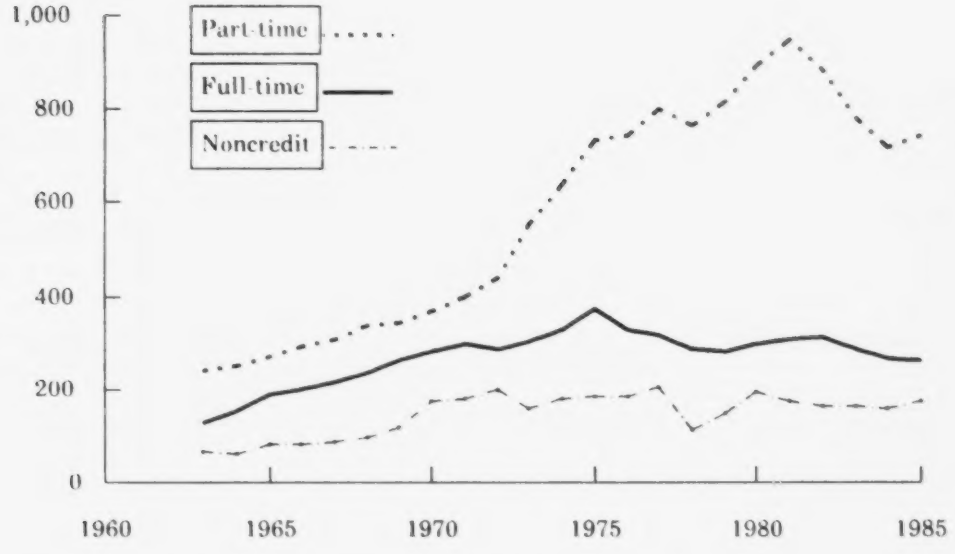
After an extended debate in 1983 on the related issues of community college fiscal support and student fees, the Legislature and Governor reached agreement on a solution (embodied in AB 1XX) in January 1984.

*Enrollment Trends*

Trends in community college enrollments result from the interaction of changes in fiscal and academic policies for the institutions and changes in the state's demography (particularly the number of 18 to 24 years olds, who enroll in postsecondary education more than do other age groups) and the State's economy. When the economy turns down, fewer people work and enrollments increase because individuals turn to the colleges for occupational training and retraining. The opposite impact on enrollment occurs when the economy improves. College-going is also affected by changes in certain social and cultural factors.

After steadily increasing in the 1960s and early 1970s, California community college enrollments increased sharply in 1973, (See Figure 1.) This was due to the adoption of a fiscal policy (AB 6, 1973) that encouraged enrollment growth, the economic recession, and continued increases in the enrollment of veterans who had returned from Viet Nam. These trends shifted abruptly after 1975. In 1976, for the first time, female enrollment in California community colleges exceeded that of males. (See Chancellor's Office, 1986b). College-going declined significantly among those males over 24 years of age who returned to work in a rapidly-expanding economy. While the community college-going rate of high school graduates was stable, the number of high school graduates started what was to become nearly a decade of annual

Figure 1
CALIFORNIA COMMUNITY COLLEGES
ENROLLMENT
(in 000's)




Source: Chancellor's Office Management Information System, 1986.

declines. This, along with a decline in the number of veterans (who had exhausted their education benefits) led to declines in full-time enrollment.

The substantial decrease in enrollment in 1978 was due to passage of Proposition 13, which reduced the property tax support of community colleges by more than one-half. While the state General Fund assumed part of the loss, there was a 7 percent reduction in college budgets, which resulted in reductions in course offerings, particularly those taught by part-time faculty, and in student support services.

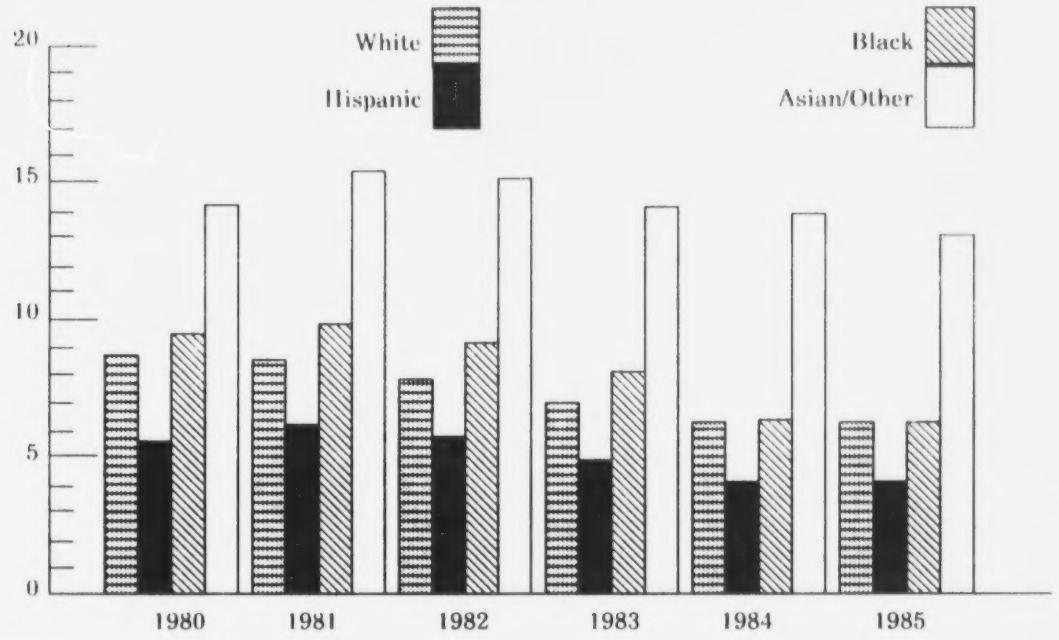
Funding for community colleges was restored in 1979 (AB 8). This higher budget level and the beginning of the recession in 1980 led to rapidly expanding enrollments. The community colleges recorded their peak enrollment total of 1,430,000 students in 1981.

Noncredit enrollment, however, stabilized beginning in 1981 because of a decrease in the fiscal support of these courses. And, in 1982, the reduction in tax support for courses mentioned above, together with level funding (no increase) for other courses in both 1982 and 1983 led to significant reductions in the number of courses and services and, consequently, in enrollment.

Thus, while California's population has increased by 10 percent since 1980, California community college enrollment has decreased by 15 percent. Largest percentage losses of enrollments have been in agriculture, consumer education, education, architecture, fine and applied arts, psychology, and social science. (See Chancellor's Office, 1986b). Less-than-compensating increases have been recorded in computer science, interdisciplinary studies (including English as a second language), commercial services and mathematics enrollments.

While California's Asian and Hispanic populations have increased dramatically since 1980, their community college enrollments have not. Consequently, the proportion of the state's Asians attending community colleges, while relatively high, is declining and the historically low proportion of Hispanics who enroll is also declining. (See Figure 2)

Figure 2
ENROLLMENT IN CALIFORNIA COMMUNITY COLLEGES
AS PERCENT OF POPULATION
BY ETHNICITY




SOURCE: Appendix B.

The largest decline in California community college enrollment during this decade has been among Black students. Their community college-going proportion has declined by one-third -- much of that in 1984. Community colleges elsewhere in the country also have experienced decreases in Black enrollment, but not to the same degree. (See Appendix C.)

Also deterring both Blacks and Hispanics from California postsecondary education are their low high school graduation rates and, even among graduates, relatively low numbers who are eligible for four-year institutions (California Postsecondary Education Commission, 1985). These patterns are consistent with those reported elsewhere in the country (see American Council on Education, 1985).

Thus, changes in funding policies and demographics, along with labor market fluctuations, continue to impact California community college enrollments just as they did during the late 1970s. Other factors, however, such as more rigorous academic standards, changes to academic calendars, and increased student fees also have played an important part in the significant enrollment loss of the past four years. Of particular concern and the basic topic of this study is the impact of the new community college fee and financial aid policies adopted in 1984.

*The 1984 Policy Change*

AB 1XX (1984) established a mandatory enrollment fee, beginning Fall 1984, of $50 per semester or $100 per year for those taking six or more credit units and $5 per unit for those taking less than six units. Students taking noncredit courses do not pay the fee. At the same time, ten permissive fees for instructional materials, health, and other student services were eliminated. Among the fees colleges can still charge to students are those for dropping courses and for parking (see table on next page).

Two percent of the fee revenue was to be retained locally for use in managing the fee and in distributing financial aid. The balance of the fee revenue was to be applied as a direct offset to the State General Fund apportionment for the district.

Along with the fee changes, AB 1XX authorized financial aid for low income students. In response, the Board of Governors adopted a financial assistance program (BFAP) which, during 1984-85, was to distribute $15 million in financial aid. The Board adopted regulations under which colleges were to administer three kinds of student aid: fee credits, fee waivers, and Board of Governors grants.

| | Community College Fees in Effect | |
|---|---|---|
| | Prior to 1984 | 1984 to 1987 |
| Nonresident Tuition | X | X |
| Community Services Classes | X | X |
| Classes Not Eligble for ADA | X | X |
| Mandatory Enrollment Fee | | X |
| Eye Protection Devices | X | X |
| Field Trips | X | |
| Field Trip (in-state) Insurance | X | |
| Field Trip (out-of-state) Insurance | X | X |
| Instructional Materials | X | * |
| Sale of Student Products | X | X |
| Materials Fee for Adult Classes | X | |
| Health | X | |
| Parking | X | X |
| Child Development Centers | X | X |
| Dormitories | X | X |
| Late Application | X | |
| Medical Insurance for Athletes | X | X |
| Use of Nondistrict Facilities | X | |
| Program Changes -- Adds | X | |
| Program Changes -- Drops | X | X |
| Student Records | X | X |
| Transportation of Adults | X | |
| Fee for Reduction of Common Fares | X | |

* While eliminated, subsequent legislation enabled this fee to be used in a limited way.

## Findings

The new enrollment fee generated $68 million in revenue during 1984-85, $64 million of which (after offsets) was applied to the General Fund apportionments of the districts. (See Chancellor's Office, 1986a.) At the same time, permissive fees that had generated nearly $27 million in total revenue during 1983-84 were eliminated.

Since the use of permissive fees had varied substantially among districts prior to 1984, the net change in cost facing students from the new policy also varied substantially from district to district. One district actually reduced its charges per student, the statewide net fee increase for the year was $42 per student, and the largest increase was $71 per student.

Because of this variation, the impact of the fee may be examined by statistically correlating the varying fee changes and the enrollment changes for the 70 districts. If fees did have an impact, then (other things being equal), those districts increasing their fees the most would be expected to experience the largest enrollment losses. Since other factors affected enrollment changes (other things were not equal), the analysis needs to rely in part on a statistical technique -- multiple regression -- where the specific impact of fees on student enrollment can be observed while holding the impact of other factors constant.

The Field Research Corporation (FRC) survey results and other data provide added support for answering the survey questions posed in AB 1XX. These data show changes in student socioeconomic characteristics from before the fee (spring 1984) to the first year (spring 1985) and second year (spring 1986) of the fee's implementation. If the fee had an impact, one would expect (a) loss of low income and minority students who are unable to pay the fee and do not obtain financial aid, (b) enrollment of fewer part-time students taking six to eleven units since they appear to be the most effected by the fee's structure, and (c) possible changes in the kinds of students who enroll after the fee's imposition.

Results of the regression analysis, discussed more fully below and in Appendix D, indicate that the fee increase in 1984 did have a statistically significant impact on enrollment that was not compensated by the BFAP. Those districts that increased their fees the most experienced the largest losses in enrollment. While the regression model is the most powerful statistical tool available for this purpose, it has limitations and the empirical results require careful interpretation. Moreover, several factors other than the fee also played a lesser, though statistically significant, part in the enrollment decline.

The data on student socioeconomic and other characteristics indicate that:

(1) the fee's structure had a greater impact on students taking six to eleven units than on other students;

(2) low income and Black students appear to have been affected more by the fee than were other students; and

(3) there was a slight change in the kinds of students and their objectives after the fee.

Results from studies of 1984 enrollment changes in specific districts within California are generally consistent with the above findings from statewide studies. The FRC data provide only an indirect indication of the reasons why students withdrew. This is accomplished by contrasting the characteristics of students enrolled after the fee's imposition with those of students enrolled before the fee. Three of the local studies help fill the gap in information about formerly enrolled students who did not continue in 1984.

The beginning of the new enrollment fee in fall 1984 marked the third straight year of enrollment decline since community colleges recorded their peak in 1981. Budget and course cuts are thought to have been the primary reasons for 6% and 8% declines in 1982 and 1983. The fee and other factors led to the 7% decline in credit enrollment in 1984. In the second year of the fee, fall 1985, credit enrollment was unchanged and noncredit enrollment increased. Student fees in 1985 were virtually unchanged and, following their initial 1984 impact, do not appear to be exerting any significant added influence on enrollment. Moreover, preliminary data suggest that credit enrollment may have increased in fall 1986.

Findings to date for each of the seven major study questions are presented below. In some cases, specific questions remain and the necessary additional work is described.

*(1) Impact of the Fee on Student Enrollment*

The decline of 7% in credit enrollment in 1984 can be attributed to several conflicting influences. For the first time in three years, there was a budgeted increase for inflation and enrollment growth and there was also a financial incentive in the community college funding mechanism to restore enrollment losses that had taken place in 1983. Reacting to these incentives, community colleges attempted to grow by increasing their number of course sections (by nearly 4%) over 1983. Despite this effort to increase "supply" and an increasing California adult population, credit enrollment decreased. This decrease could have been due to several factors besides the impact of the new enrollment fee: improvements in employment, declining numbers of high school graduates, changes in community college academic calendars and other

academic practices, actions by other providers of postsecondary education, such as the University and State University, and changes in local demographics.

An examination of 1984 fee and enrollment changes for the 70 community college district reveals that those districts that implemented larger fee increases experienced larger enrollment losses:

| Number of Districts | Range of Fee increases (dollars per student per year) | Average Enrollment Change per District (percent) |
|---|---|---|
| 14 | $-8.04 - 30.95 | -4.0 |
| 14 | 32.48 - 39.75 | -6.3 |
| 14 | 40.26 - 46.38 | -7.2 |
| 14 | 46.58 - 56.16 | -7.7 |
| 14 | 56.47 - 70.51 | -10.3 |

SOURCE: Appendix D.

However, a number of other factors interacted along with the fee to produce the 1984 enrollment loss As noted above, the key to determining the relative influence of each of these possible factors on enrollment is to examine the relationship of each to enrollment, while holding the impact of the others as constant as is possible. This is attempted through the use of a statistical regression model on district data and the results are described in Appendix D.

The results in Appendix D show that the following factors contributed in a statistically significant way to the Fall 1984 credit enrollment decline:

(a) increased student fees

(b) improved employment

(c) fewer high school graduates

(d) earlier starting academic calendars

(e) continuation of some factors that led to the 1983 loss

Notably, the fee impacted full and half-time enrollment, but not part-time enrollment (those taking less than six units). It also appears that the decline in

full-time enrollment was stemmed somewhat through the addition of course sections by some relatively wealthy districts (as measured by their budget reserves). (More will be said below about the impact of the fee on academic load.) The impact of increased employment took place primarily within the large urban districts. Changes in academic calendars and in the number of high school graduates were significant both in and out of the large urban districts. Black students appear to have reacted to the new fee more than did students from other racial and ethnic groups.

One way of assessing the validity of these results is to estimate the "cost-elasticity" of enrollment that is suggested by the regression statistics. Cost-elasticity is measured by the percent change in enrollment that resulted from the percent change in cost due to the fee. Results of these calculations of cost-elasticity for the 1984 enrollment change, described in Appendix D, appear to be within the reasonable range for a first-time fee imposed on community college students and are consistent with findings of other similar studies.

The changes in (a) student costs from the fee, (b) employment, and (c) high school graduates, together with related elasticities, suggest that the fee had a greater impact on enrollment than did employment conditions and the decline in high school graduates, the next two most statistically significant factors.

Community college enrollments in other states also declined in 1984, the first such decline since 1976 (see Appendix C). Elsewhere in 1984, changing conditions which are thought to impact enrollment were quite similar to those in California. The decline elsewhere (-3.7%) was just half that which took place in California (-7.5%) and, by contrast, was confined to full-time enrollment. Nationwide losses appear attributable to the continuing decline in high school graduates and to an improving economy (potential students returning to work and either not enrolling or enrolling part-time). The greater loss in California, particularly among part-time students, may be explained by the first-time imposition of a fee that impacted students taking 6 to 11 units the most.

(2) *Impact of the Fee on the Ethnic Distribution of Students*

The findings suggest that Blacks were affected by the fee to a greater extent than were other racial and ethnic groups. Disproportionate 1984 losses of younger Black students appear to have been due to a number of financial considerations (of which the fee was one) that led many of them to work, rather than enroll. As noted above, some of the enrollment loss also can be attributed to the decline in high school graduates. It does not appear that the slight increase in the proportion of Black high school graduates going directly to the four-year segments was a factor (Chancellor's Office, 1986b).

The following distributions reveal increases in the proportions of Asian and Hispanic students along with the decrease in Black students:

| | Percent Distribution of Students | | |
|---|---|---|---|
| | 1983 | 1984 | 1985 |
| Native American | 1.5 | 1.5 | 1.3 |
| Asian | 9.0 | 9.4 | 9.8 |
| Black | 8.6 | 7.6 | 7.3 |
| Filipino | 2.1 | 2.3 | 2.3 |
| Hispanic | 12.0 | 12.0 | 13.8 |
| White | 63.1 | 63.5 | 63.1 |
| Other | 2.8 | 2.8 | 2.4 |
| Total | 100.0 | 100.0 | 100.0 |

Source: Chancellor's Office, 1984, 1985, 1986c.

While the 1984 loss in Hispanic students was the same as that for all students, it must be viewed in the context of the rapidly-expanding population of Hispanic adults in California. The result, as displayed in Figure 2, is a decrease in an already low participation rate for this group. In the second year of the fee (1985), Hispanic enrollments increased substantially while Black enrollment was unchanged.

The 1984 decline in Black enrollment was 18%. The largest statewide losses were among those Black students who would have been: taking 6 to 11 units, male, under 30 years of age, and attending during the day. (See Field Research Corporation, 1986.)

This profile is consistent with the experience found in a study by the Los Rios Community College District (Los Rios, 1985). In Los Rios, the 1984 enrollment loss was greatest among those Black students who had previously attended. In a sample survey of these individuals, employment or job conflicts were the reasons cited most often for not enrolling. (That employment was a significant factor in such decisions is confirmed by the district analysis in Appendix D.) One-third of the respondents in the Los Rios study indicated that financial reasons (including the fee) accounted for at least part of their decision.

A study of enrollment loss in the San Diego district revealed that, for Black students, general financial reasons (including fees, books, and employment) were most important in the decision not to return to community college. One-fourth of formerly enrolled students, surveyed in the San Bernardino district, indicated that job related concerns were the most important reason for not reenrolling in 1984, followed by personal reasons (San Bernardino, 1985). The fee and financial concerns were more important to minorities than to White

students and were cited by Hispanics as the second most important reason for not reenrolling.

FRC data suggest there was a large drop in the number of Black high school graduates who enrolled after the fee (Field Research Corporation, 1986). This, however, may be part of a longer term trend. A 1985 study in the Peralta district found that the number of high school graduates in its service area, many of whom are Black, had gradually increased during this decade, but that the proportion attending a Peralta community college had decreased by nearly one-half (Peralta, 1985).

It is not clear why Black students appear to have been affected by the fee more than Hispanics, since both groups report similar incomes (see Appendix E). FRC data do suggest, however, that Black students may have slightly greater economic need than Hispanic students to enter the job market instead of continuing their education. The recent losses in Black students in California exceed the losses for this ethnic group experienced in two-year colleges elsewhere in the country (see Appendix C).

*(3) Impact of the Fee on the Income Distribution of Students*

If the new enrollment fee in Fall 1984 had an impact on students that was not fully compensated by financial aid, the following effects could be expected:

(a) losses of low-income and possibly middle-income students,

(b) a relative increase in upper-income students, and

(c) possible changes in the working hours and borrowing patterns of students.

Consistent with this logic, enrollment losses were greatest in those districts who residents report the lowest household incomes. Data from the FRC surveys on the reported incomes of students (adjusted for inflation) show there was a slight shift in the proportions of students from lower- and middle-income ranges to the upper ranges in the first year of the fee (measured in the FRC survey by students enrolled in Spring 1985). This shift was reversed slightly in year two (see also Figure 3):

Distribution of Students by Income

| | Self-supporting from own income | | | | | |
|---|---|---|---|---|---|---|
| | Pre-Fee | | Post-Fee | | Second Year of Fee | |
| $0 - 12,000 | 274,399 | 36.0% | 242,804 | 32.8% | 248,639 | 33.1% |
| $12,001 - 24,000 | 213,421 | 28.0 | 196,909 | 26.6 | 205,822 | 27.4 |
| >$24,000 | 274,399 | 36.0 | 300,545 | 40.6 | 454,462 | 39.5 |
| Total | 762,219 | 100.0 | 740,258 | 100.0 | 751,175 | 100.0 |
| | Dependent on parent's income | | | | | |
| | Pre-Fee | | Post-Fee | | Second Year of Fee | |
| $0 - 18,000 | 156,509 | 33.8% | 130,767 | 30.6% | 133,677 | 31.5% |
| $18,001 - 36,000 | 167,961 | 35.2 | 146,151 | 34.2 | 136,648 | 32.2 |
| >$36,000 | 152,691 | 32.0 | 150,424 | 35.2 | 154,048 | 36.3 |
| Total | 477,161 | 100.0 | 427,342 | 100.0 | 424,373 | 100.0 |

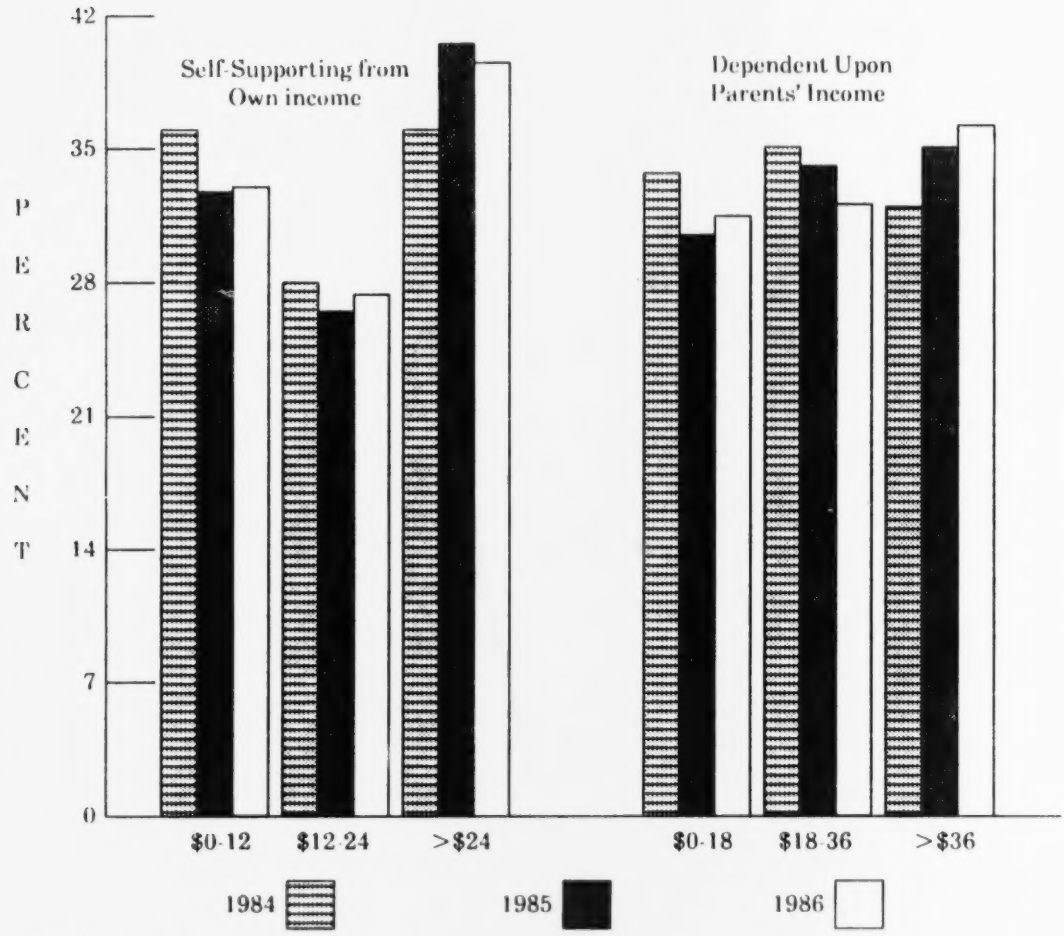
Source: Appendix E.

As noted in Appendix E, the first-year shifts were statistically significant in the case of Black students who were dependent on parents' or others income. A statistically significant shift from middle to upper incomes also was reported for self-supporting White students who were relying on their own incomes. There also was a decline in the percentage of students who are dependent on parents' income (see Appendix E). This percentage of dependent students declined from 38.5% to 36.1% and the percentage of self-supporting students increased accordingly.

The slight second year shift back toward a greater proportion of low income students could reflect the impact of at least two factors. First, no further fees were added in year two and there appears to have been little added impact. Second, there was a substantial increase in the number of students served and amount of financial aid delivered through the BFAP and through federal Pell Grants in the second year.

While relatively more students were self-supporting, there was no significant change in the working patterns of students over the three years of the survey -- four of five already worked (see Appendix E). Student borrowing declined in the first year of the fee, then increased in the second year. This pattern seems consistent with the shift in incomes reported. Following the fee's imposition, the remaining students were relatively more wealthy and had less need to borrow. Reaction to publicity on loan defaults also may have been a factor.

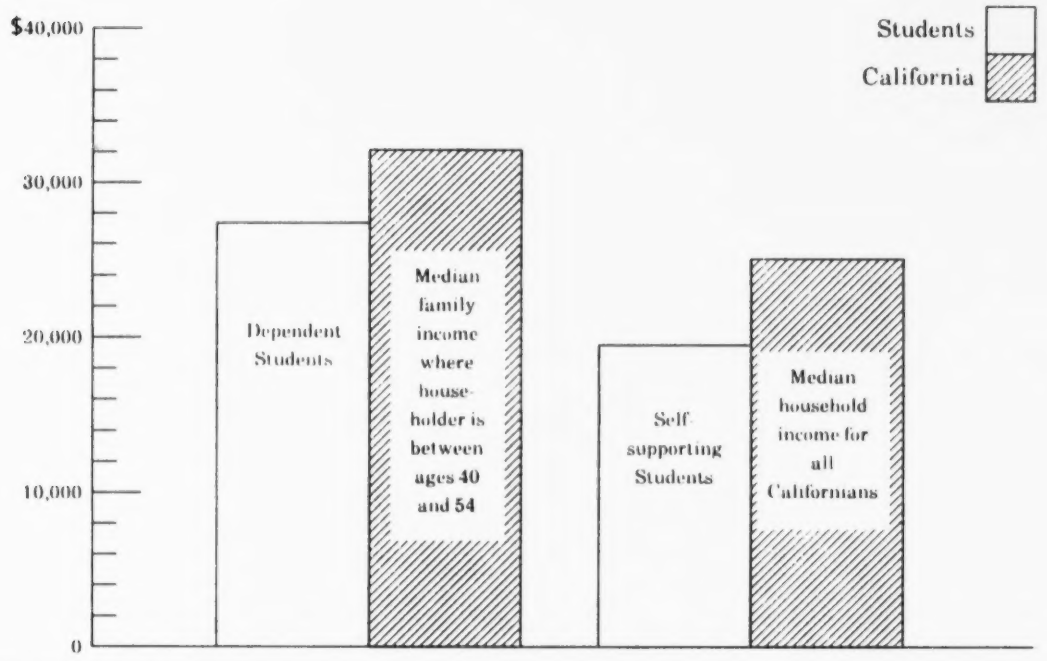
Figure 3
PERCENT DISTRIBUTION OF COMMUNITY COLLEGE
STUDENT BY ANNUAL INCOME
(in 000's)




Source: Appendix E

Despite the 1984 loss in enrollment of low income students, FRC data indicate that California community college students are less wealthy than those adults in the state's general population who are in similar circumstances. (see Figure 4.) At present, a more wealthy California taxpaying public subsidizes a part of the cost of educating a less wealthy community college student.

Figure 4
ANNUAL INCOME FOR CALIFORNIA COMMUNITY COLLEGE STUDENTS AND ALL CALIFORNIANS
1985




SOURCE: Appendix E.

A typical criticism of public tax support for postsecondary education is that lower income taxpayers subsidize students from higher income backgrounds. Thus, the redistributional consequences of postsecondary education are "regressive" and, therefore, do not satisfy equity objectives. This may be true for many four-year institutions and for community colleges in some other states, but it is not true in the case of California community colleges.

(4) *Impact of Fee on the Distribution of Full- and Part-Time Students*

Following the fee's imposition, the largest enrollment decline took place among those part-time students taking 6 to 11 units:

| Units attempted | Percent change in credit enrollment from prior year | | |
|---|---|---|---|
| | 1983 | 1984 | 1985 |
| <3 | -17 | 0 | +8 |
| 3-5 | -11 | -3 | 0 |
| 6-8 | -8 | -20 | 0 |
| 9-11 | 7 | 10 | 3 |
| 12-14 | -6 | -7 | -3 |
| 15 + | -12 | -6 | -5 |
| All students | -8 | -7 | 0 |

Source: Chancellor's Office, 1984, 1985, 1986c.

These changes led to the following distributions of students by academic load:

| Units attempted | Percent distribution of credit students | | |
|---|---|---|---|
| | 1983 | 1984 | 1985 |
| 12 or more | 26.7 | 27.0 | 26.0 |
| 6 to 11.9 | 30.3 | 27.5 | 27.3 |
| 0 to 5.9 | 43.0 | 45.5 | 46.7 |

The disproportionate loss from 1983 to 1984 in students taking 6 to 11 units appears attributable to the structure of the new enrollment fee: $50 per semester for those taking six or more credit units and $5 per unit for those taking less than six credit units. The $50 fee for those students taking 6 to 11 units represented the largest relative increase in costs. Students taking 6 to 8 units, for instance, could drop one course, be subject to the $5 per unit charge, and pay less than one-half the $50 fee; or they could take an additional course at no additional cost.

That many students decided to shift from two courses to one in order to avoid the full impact of the fee is seen in the nominal losses in 1984 reported in those taking less than six units. Aside from this shift, losses in students taking less than six units appear to have had little to do with the fee, but rather were the result primarily of changing employment conditions (see Appendix D).

Two other shifts in the academic pursuit of students appear significant. First, the FRC data show there was little change in the academic objectives of students before and after the fee (Field Research Corporation, 1986). The one

exception to this was that relatively fewer students were enrolled to upgrade their job skills after the fee's imposition. Of the changes in the prior education reported by students after the fee, the most significant was the decline in Black high school graduates, noted above.

A second shift may have taken place in the retention rate of students. The FRC studies did find a significant change, after the fee, in the number of students who were enrolled as of first census, but reported not being enrolled late in the term at the time of the survey. In 1984, 20% of those surveyed were in this category. After the fee, in 1985, this figure dropped to 15% and, in 1986, to 14%. This suggests that the retention rate of those enrolled after the fee was higher. This shift, however, does not appear to be confirmed by data on student hours from first to second census, gathered in the apportionment process:

RATES OF STUDENT ATTRITION DURING TERMS

| YEAR | FIRST TO SECOND CENSUS[1] | FIRST CENSUS TO LATE IN TERM[2] |
|---|---|---|
| 1980-81 | 13.8% | -- |
| 1981-82 | 13.7 | -- |
| 1982-83 | 13.7 | -- |
| 1983-84 | 11.5 | 20.0% |
| 1984-85 | 11.5 | 15.0 |
| 1985-86 | 12.1 | 14.0 |

1 Based on student contact hours for all terms in the fiscal year, as reported to the Chancellor's Office for apportionments.
2 Based on a scientific sample of student enrollments during the spring semester conducted by the Field Research Corporation.

Apportionment data indicates that prior to fall 1983, the rate of attrition measured in student contact hours was relatively stable. After a fee for dropping courses after the first census was imposed in fall 1983, this attrition rate decreased by more than two points to a level of 11.5% during the first two years, then increased slightly to 12.1% in the third year. In fall 1984, when the enrollment fee was imposed, the apportionment data do not suggest any change in student retention, while the FRC Data shows a 5 percentage-point improvement.

The FRC study did not attempt to directly measure attrition but, rather, indirectly inferred it from two questions asking students if they were enrolled in a credit or noncredit class at the time of the self-administered student survey. By that time, some short-term classes may have been completed. Another reason for the apparent difference between apportionment and FRC data is the possibility of improved sampling by districts and the slightly

reduced student response rates in the second and third years of the FRC study. Both factors could have contributed to the reported decline in attrition. These factors, however, would not appear to fully explain the shift in student attrition reported in the FRC survey.

(5) *Impact of the Fee on Changes in Staffing and Costs of Administering Fees*

As noted above, AB 1XX established a mandatory enrollment fee, abolished ten permissive fees, established a program of state financial aid to be administered by the Board and local districts (BFAP), and set aside 2% of the fee revenues to be used for costs of administering the fee.

Aside from managing fee deferrals, an activity new to districts, it was not clear that trading several permissive fees (which were not charged to all students) for one general fee (to be charged to all students -- though at differing rates) would generate any substantial increase in college workload. Administering the BFAP clearly was an added workload for district financial aid and business offices, however. While the 2% set-aside was not restricted, the legislative intent was that these revenues be used to meet the costs incurred in collecting the fee. It is estimated that the two percent feature produced $1.4 million in revenues that were retained by the districts during 1984-85. This amounted to just over $13,000 per college.

A recent survey by the Chancellor's Office on the effort expended by colleges during 1984-85 to manage the new fee (see Appendix F) indicates that:

(a) nearly nine of ten colleges either changed or established new procedures to collect the new fee,

(b) six of ten colleges required additional staffing for this purpose,

(c) over half of the colleges incurred substantial start-up costs, and

(d) three of five colleges feel there will be continuing costs from the fee.

College staff estimate they incurred the following costs per college for fee administration:

| | 1983-84 | 1984-85 | 1985-86 |
|---|---|---|---|
| Total | $12,410 | $36,993 | $29,053 |
| Added | | 24,583 | 16,643 |

On the average, each college added 0.6 full-time equivalent staff to help administer the new fee.

The estimated start-up costs were greater and the on-going costs would appear to be slightly greater than the revenue expected to be generated under the two percent feature of AB 1XX.

(6) *Impact of the Fee on the Availability of Federal, State, and Other Sources of Financial Aid*

With the imposition of the $100 per year fee, most students with financial need could have received an additional $50 in federal Pell Grant assistance and $50 from the BFAP, though the eligibility calculations made the actual result more complex. Thus, more Pell Grant aid would have been available in 1984 than before because of the fee. The average award did increase by $145 or about one fourth:

Pell Grants in 86 California community colleges

| Year | Recipients | $ Amount | $ per Recipient |
|---|---|---|---|
| 1982-83 | 69,765 | 39,885,637 | 572 |
| 1983-84 | 66,201 | 37,906,389 | 573 |
| 1984-85 | 63,515 | 45,721,927 | 720 |
| 1985-86 | 67,306 | 57,834,228 | 859 |

SOURCE: Chancellor's Office: Specially Funded Programs Unit, 1986.

The increase in average grant was due in part to the new enrollment fee, of which $50 typically was covered by the Pell Grant. The bulk of the increase, however, was due to changes in federal regulations which (a) increased, from 50% to 60%, the portion of costs to be covered by the Grants and (b) increased the allowable costs for commuting students who live away from home.

Unexpectedly, the number of Pell Grant recipients declined in 1984-85. This decline seems due to more complex federal regulations and the new Board program, which together (given no change in financial aid office staffing) resulted in substantial problems in the delivery of financial aid.

In its first year, the BFAP was three part: fee credits for those taking less than six units and not eligible for Pell Grants, fee waivers for those on public assistance, and Board grants. The use of fee waivers did not deter Pell Grant assistance, since a student's cost of education was calculated prior to this offset. Pell Grant assistance was deducted from the amount for which students could have been eligible through the BFAP. This added to confusion about the

program and, therefore, was discontinued in the second year. This and other improvements in the delivery of financial aid, together with a greater awareness on the part of potential students, contributed to an increase in the number of BFAP awards and Pell Grant recipients in the program's second year. The Pell assistance also increased because the maximum award was again increased, this time by $200.

The availability of other sources of federal aid such as supplementary grants (SEOG), college work study, loans, and specially directed aid does not appear to have been impacted appreciably by the new fee and by the BFAP.

The Board's intent was that fees not be paid from Extended Opportunity Programs and Services (EOPS) grants. While use of BFAP to pay the fee could have reduced EOPS need and, therefore, the grant, this was not significant. The fee and BFAP also had no discernible impact on Cal Grant assistance nor are they likely to have impacted levels of institutionally-supported student financial aid.

During 1984-85, the bulk of financial aid on which community college students relied was in the form of loans and, to a lesser extent, Pell Grants. The BFAP and other forms of state aid comprised 13% of aid packages. Just over three-fourths of the financial aid obtained by community college students comes from federal sources:

Financial Assistance Awarded to
California Community College Students
1984-85

| | $ Millions | Percent |
|---|---|---|
| Federal: | (141.8) | (77.1) |
| GSL, NDSL | 68.5 | 37.3 |
| Pell Grants | 54.1 | 29.4 |
| Other federal grants | 8.2 | 4.5 |
| Work-study | 11.1 | 6.0 |
| State: | (23.8) | (12.9) |
| BFAP | 4.9 | 2.7 |
| Cal Grants | 10.3 | 5.6 |
| EOPS | 8.6 | 4.7 |
| Institutional | 18.3 | 10.0 |
| Total | 183.9 | 100.0 |

SOURCE: Chancellor's Office, Specially Funded Programs Unit, 1986.

Between 1980 and 1985, the constant dollar value (adjusted for inflation) of federal student aid decreased by nearly 10%. During the same five year period, the utilization of aid sources nationally has shifted from grants to loans:

Percent of Aid

| Aid Type | 1980 | 1985 |
|---|---|---|
| Grants | 55 | 47 |
| Loans | 41 | 50 |
| Work-study | 4 | 3 |

SOURCE: Chancellor's Office, Specially Funded Programs Unit, 1986.

While 37%, rather than half, of the financial aid received by California community college students is in the form of loans, this is substantially higher than the level reported in 1980. Moreover, despite the recent increases in Pell assistance, community college students do not appear to use all the federal and state financial aid for which they are eligible. The new fee and BFAP seem to have had little impact on this situation. Many young students with transfer or first-job objectives and low incomes do not receive financial aid (see Appendix E). Just two of ten full-time community college students apply for Pell Grants and only one of these receives aid. Since four of five students work (virtually always off campus), there should be further analysis of the needs of those students who, with additional financial aid, might work less and attend college more consistently and successfully.

(7) *Impact of the Fee on the Administration and Distribution of the Financial Aid in this Act by the Chancellor's Office and by Districts*

The Board of Governors financial aid program (BFAP) was to help preserve access by targeting aid to low income students to offset the added cost of the new fee. A high correlation of Board aid per student and district income shows that where the income of district residents was lower, more financial aid per student was delivered (Appendix D). Other findings, however, suggest that the first-year impact of the BFAP was modest and, in any case, less than expected.

BFAP regulations distributed funds to districts on the basis of estimates of household income derived from the U.S. Census, among other measures. Districts, in turn, report having distributed $4.9 million through 144,000 awards during 1984-85, an average award of $34:

| | 1984 85 | 1985 86 |
|---|---|---|
| Awards | 144,288 | 183,985 |
| Amount | $4,943,672 | $7,514,234 |
| Amount per award | $ 34 | $ 41 |

SOURCE: Chancellor's Office, Specially Funded Programs Unit, 1986.

This aid amounted to an average statewide offset of $6 per student from the fee increase and varied from $1 to $31 per student in different districts, depending upon the socioeconomic characteristics of the area served. The analysis in Appendix D suggests that these offsets had little impact on enrollment. While admittedly a gross measure, the adjustment would have been expected to reduce the losses in enrollment, but it did not. This finding and the fact that just one-third of the available aid was delivered suggest that the BFAP did not have the full impact intended.

Eight percent of the students surveyed by FRC in Spring 1985 report having received BFAP and those ethnic groups with the lowest incomes reported the largest percentages of recipients. Despite the high correlation between low income and financial aid, FRC data show that more than half of those students (enrolled in spring 1985) who were on public assistance did not receive fee waivers even though they were automatically eligible. Also of concern is a group for which no data are available: those were in financial need, but received no aid and, as a result, did not enroll.

Since students responding to the FRC survey did not increase their work appreciably from before the fee to after the fee, it appears that few students reduced their academic load so as to work more to pay the fee. A number of students do appear to have reduced their load to avoid the fee. This does not indicate, however, the number of students (noted above) who, with more financial aid, would work less and maintain or increase their academic load.

Three factors are believed to have contributed to the incomplete use of financial aid. First, eligibility forms and procedures, patterned after those used by the Student Aid Commission, were quite complex, particularly for individuals not familiar with such procedures. Second, community college financial aid offices did not have sufficient staff to undertake the BFAP along with more complex federal financial aid regulations. Finally, the pattern of distributing less aid than was available during the program's first year is consistent with that of new financial aid programs initiated elsewhere. It generally takes two to three years before news and details of aid programs reach all those potential students who could benefit.

Acknowledging the complexity of procedures, the Board acted in July 1985 to simplify the program (in phases) through regulation changes to (a) combine the three separate programs (fee credit, fee waiver, and Board grant) into one grant program, (b) eliminate the unit enrollment distinctions between those enrolled in more- and less than six units, and (c) modify the aid application procedures and forms. Staffing problems have been addressed in legislation that allocates 7% of financial aid funds for administrative purposes.

During the program's second year (1985-86), $7.5 million in aid was delivered to 185,000 students. This improvement appears to have been due largely to increased awareness on the part of students and more effective aid delivery, the consequences noted above. Financial aid office staffing was not increased until spring 1986 and the full impact of the regulation changes by the Board weren't felt until fall 1986 (the program's third year).

The seven percent allowance for financial aid office staffing authorized beginning spring 1986 adds $10,000 per college (about 0.5 full-time equivalent clerical staff). This amounts to an increase of nearly five percent in financial aid office resources, but does not enable these offices to meet the needs of community college students. A 1985 study by the Chancellor's Office showed that, based on comparable workload data, community college financial aid offices would need to increase their resources by one-third across the state (a total of about $8 million) in order to achieve the staffing levels authorized in budget formulae used by California State University.

## REFERENCES


American Council on Education. *Minorities in Higher Education*. Washington D.C.: Office of Minority Concerns, 1985.

California Postsecondary Education Commission. *California College-Going Rates, 1984 Update*. Sacramento: the Commission, September 1985.

Chancellor's Office, California Community Colleges. *Community College Fees and Financial Aid*. Sacramento: the Office, December 1986a.

_____. *Enrollment Trends: Preliminary Analysis of Fee Impact*. Sacramento: the Office, January 1986b.

_____. *Report on Enrollment, Fall 1983, Fall 1984, Fall 1985*. Sacramento: the Office, 1984, 1985, and 1986c.

_____. *Study of Fee Impact: Progress Report Summary*. Sacramento: the Office, October 1986d.

Field Research Corporation. *Second Student Followup*. San Francisco: the corporation: July 1986.

Los Rios Community College District. *Planning For Change: Fall 1984 Enrollment Update*. Sacramento: the district office, January 1985.

Peralta Community College District. *Enrollment Facts: Fall 1984*. Oakland: the district office, February 1985.

San Bernardino Community College District. *Why Students Don't Return: A Survey of Nonreturning Students*. San Bernardino: the district office, May 1985.

## STUDY OF FEE IMPACT: PROGRESS REPORT

### Appendices

A. Section of AB 1XX Describing Study of Fee Impact
Fee Impact Study Advisory Committee

B. Community College Enrollment, Population and Participation Rates, 1980-1985

C. National Data

D. Analysis of District Changes

E. Student Socioeconomics, 1984 to 1986

F. Fee Administration

## APPENDIX A
## SECTION OF AB 1XX (1984)
## DESCRIBING STUDY OF FEE IMPACT

SEC. 17. (a) It is the intent of the Legislature to ensure that the imposition of a mandatory fee does not impair access to, or the quality of, California community colleges. To achieve this purpose, the Chancellor of the California Community Colleges, in consultation with the California Postsecondary Education Commission, shall conduct a study of the impact of the mandatory fee upon California community colleges. The study shall determine the fee's impact upon all of the following:

(1) Student enrollments

(2) Ethnic distribution of students.

(3) Income distribution of students.

(4) The distribution of full-time and part-time students.

(5) Changes in the staffing requirements and costs of administration.

(6) The availability of federal, state, and other sources of financial aid to community college districts.

(7) The administration and distribution of the financial aid prescribed by this act by the chancellor's office and at the district level.

The chancellor may collect from community college districts any data necessary to conduct the study.

Based upon the study, the chancellor shall submit his or her findings and recommendations to the Joint Legislative Budget Committee and the California Postsecondary Education Commission in a progress report on or before January 1, 1987, and in a final report on or before July 1, 1987.

(b) The chancellor shall conduct the study pursuant to subdivision (a) in consultation with an advisory committee appointed by the chancellor and composed of representatives from community college districts, the Department of Finance, and the Office of the Legislative Analyst. District representatives on the advisory committee may include students, faculty members, administrators and governing board members.

(c) The California Postsecondary Education Commission shall submit to the Legislature its written comments and recommendations regarding the progress report and the final report filed by the chancellor pursuant to subdivision (a).

## CHANCELLOR'S FEE IMPACT ADVISORY COMMITTEE

### 1986

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Chancellor's Office

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Postsecondary Education Commission

# APPENDIX B

## Table 1
ESTIMATE OF CALIFORNIA COMMUNITY COLLEGE ENROLLMENT, POPULATION AND PARTICIPATION RATES BY RACE AND ETHNICITY
1980 TO 1985

| | 1980 | 1981 | | 1982 | | 1983 | | 1984 | | 1985 | | 1980-85 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ETHNIC GROUP | NUMBER | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | % CHANGE |
| WHITE | | | | | | | | | | | | |
| ENROLLMENT | 923,722 | 948,398 | 2.7 | 856,693 | 9.7 | 777,597 | -9.2 | 739,153 | -4.9 | 738,002 | -0.2 | -20.1 |
| TOTAL POPULATION (000s) | 10,918 | 10,999.5 | 0.7 | 11,081 | 0.7 | 11,162.5 | 0.7 | 11,244 | 0.7 | 11,311 | 0.6 | 3.6 |
| PARTICIPATION RATE | 8.46 | 8.62 | 1.9 | 7.73 | -10.3 | 6.97 | -9.8 | 6.57 | -5.7 | 6.52 | -0.8 | -22.9 |
| HISPANIC | | | | | | | | | | | | |
| ENROLLMENT | 162,833 | 173,109 | 6.3 | 175,222 | 1.2 | 164,411 | -6.2 | 153,502 | -6.6 | 163,411 | 6.5 | -0.4 |
| TOTAL POPULATION (000s) | 2,885 | 3,042.5 | 5.5 | 3,202 | 5.2 | 3,361.5 | 5.0 | 3,523 | 4.8 | 3,696 | 4.9 | 28.1 |
| PARTICIPATION RATE | 5.64 | 5.69 | 0.9 | 5.47 | -3.9 | 4.89 | -10.6 | 4.36 | -10.8 | 4.42 | 1.4 | -21.6 |
| BLACK | | | | | | | | | | | | |
| ENROLLMENT | 118,821 | 113,187 | -4.2 | 115,439 | 2.0 | 106,092 | -8.1 | 86,855 | -18.1 | 86,306 | -0.6 | -27.4 |
| TOTAL POPULATION (000s) | 1,199 | 1,225.75 | 2.2 | 1,252.5 | 2.2 | 1,279.25 | 2.1 | 1,306 | 2.1 | 1,333 | 2.1 | 11.2 |
| PARTICIPATION RATE | 9.90 | 9.23 | 9.4 | 9.21 | -0.2 | 8.29 | -10.0 | 6.65 | -19.8 | 6.47 | -2.7 | -34.5 |
| ASIAN/OTHER | | | | | | | | | | | | |
| ENROLLMENT | 178,042 | 195,940 | 10.1 | 196,755 | 0.4 | 190,672 | -3.1 | 188,089 | -1.4 | 187,829 | -0.1 | 5.5 |
| TOTAL POPULATION (000s) | 1,096 | 1,151.5 | 5.1 | 1,207 | 4.8 | 1,262.5 | 4.6 | 1,318 | 4.4 | 1,376 | 4.4 | 25.6 |
| PARTICIPATION RATE | 16.2 | 17.0 | 4.9 | 16.3 | -4.1 | 15.1 | -7.4 | 14.3 | -5.3 | 13.65 | -4.5 | -15.7 |
| TOTAL ENROLLMENT (000s) | 1,383.4 | 1,430.7 | 3.4 | 1,344.1 | -6.1 | 1,239.4 | -8.4 | 1,167.6 | -5.8 | 1,175.5 | 0.7 | -15.0 |
| TOTAL POPULATION (000s) | 15,099 | 15,422 | 2.0 | 16,745 | 2.0 | 17,068 | 1.9 | 17,391 | 1.9 | 17,716 | 1.9 | 10.0 |
| PARTICIPATION RATE | 8.59 | 8.71 | 1.3 | 8.02 | -7.9 | 7.26 | -9.5 | 6.71 | -7.6 | 6.63 | -1.2 | -22.8 |

*Ethnic Enrollment Estimate Metholology*

In every year there is a percentage of students whose ethnicity is unknown or unreported. Additionally, in some years, individual colleges did not report enrollment data in time to be incoporated into the Chancellor's Office Information System. To adjust for these data deficiencies, these estimates of ethnic enrollment are based on two processes: (1) distributing the state total unknown in the same proportion as the state total known for colleges which reported data and (2) utilizing the succeeding year's ethnic distribution for colleges which did not report data and applying these percentages to the colleges' enrollment headcount. Population data are based on estimates of 18 to 64 year-olds by the Center for the Continuing Study of the California Economy, Palo Alto, 1986.

Table 2
ESTIMATE OF CALIFORNIA COMMUNITY COLLEGE ENROLLMENT
BY RACE AND ETHNICITY
FALL CREDIT ENROLLMENT
1980 THRU 1985

| | 1980 | 1981 | | 1982 | | 1983 | | 1984 | | 1985 | | 1980-85 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATEGORY | NUMBER | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | % CHANGE |
| White Enrollment | 822,396 | 860,462 | 4.6 | 779,705 | -6.9 | 701,476 | -11.3 | 655,794 | -7.7 | 651,567 | -0.6 | -20.5 |
| Hispanic Enrollment | 129,290 | 135,818 | 5.0 | 144,429 | 9.3 | 134,202 | -9.6 | 122,479 | -8.7 | 128,095 | 4.6 | -1.0 |
| Black Enrollment | 108,069 | 103,675 | -4.1 | 106,402 | 5.4 | 96,808 | -11.4 | 78,734 | -18.7 | 77,916 | -1.0 | -27.9 |
| Asian/Other Enrollment | 65,242 | 86,506 | 32.6 | 82,984 | -1.4 | 83,527 | 1.0 | 83,799 | 0.3 | 87,913 | 4.9 | 34.5 |
| Filipino Enrollment | 16,422 | 18,209 | 10.9 | 22,755 | 28.4 | 22,881 | 2.1 | 22,738 | -0.6 | 22,039 | -3.1 | 34.2 |
| Amer Indian Enrollment | 17,794 | 18,744 | 5.3 | 18,790 | 3.0 | 17,213 | -10.8 | 15,222 | -11.6 | 13,743 | -9.7 | -22.8 |
| Other Enrollment | 30,995 | 30,056 | -3.0 | 32,650 | 11.5 | 29,492 | -12.0 | 26,537 | -10.0 | 23,038 | -13.2 | -25.7 |
| Total Enrollment | 1,190,208 | 1,253,4770 | 5.3 | 1,187,614 | -5.3 | 1,085,599 | -9.9 | 1,005,304 | -7.5 | 1,004,311 | -0.1 | -15.6 |

Enrollment data were drawn from the Chancellor's Office Information Services final reports. In some instances, ethnicity data were estimated for specific colleges which were not included in the final report. Estimates were based on the ethnicity and credit load distributions for the succeeding year. These proportions were applied to the missing year to estimate the credit/ethnic enrollments.

Table 3
ESTIMATE OF CALIFORNIA COMMUNITY COLLEGE ENROLLMENT
BY RACE AND ETHNICITY
FALL NONCREDIT ENROLLMENT
1980 THRU 1985

| CATEGORY | 1980 | 1981 | | 1982 | | 1983 | | 1984 | | 1985 | | 1980-85 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NUMBER | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | NUMBER | % CHANGE | % CHANGE |
| White Enrollment | 101,376 | 87,936 | -13.3 | 77,089 | -12.3 | 76,121 | -1.2 | 83,359 | 9.5 | 86,435 | 3.7 | -14.7 |
| Hispanic Enrollment | 33,543 | 37,291 | 11.2 | 30,793 | -17.4 | 30,209 | -1.9 | 31,023 | 2.7 | 35,316 | 13.8 | 5.3 |
| Black Enrollment | 10,752 | 9,512 | -11.5 | 9,037 | -5.0 | 9,284 | 2.7 | 8,121 | 12.5 | 8,390 | 3.3 | -22.0 |
| Asian/Other Enrollment | 34,742 | 31,218 | -11.3 | 31,748 | 1.7 | 28,355 | -10.7 | 28,911 | 2.0 | 29,965 | 3.6 | -13.7 |
| Filipino Enrollment | 5,377 | 3,567 | -33.7 | 3,235 | -9.3 | 3,484 | 7.7 | 3,898 | 11.9 | 4,110 | 5.4 | -23.6 |
| Amer Indian Enrollment | 1,932 | 1,550 | -19.8 | 1,539 | -0.7 | 1,478 | -4.0 | 1,624 | 9.9 | 1,541 | -5.1 | -20.2 |
| Other Enrollment | 5,538 | 6,090 | 10.0 | 3,054 | -49.8 | 4,242 | 38.9 | 5,360 | 26.4 | 5,480 | 2.2 | -1.0 |
| Total Enrollment | 193,260 | 177,164 | -8.3 | 156,505 | -11.7 | 153,781 | -1.7 | 162,296 | 5.5 | 171,237 | 5.5 | -11.4 |

**Enrollment data were drawn from the Chancellor's Office Information Services final reports. In some instances, ethnicity data were estimated for specific colleges which were not included in the final report. Estimates were based on the ethnicity and credit load distributions for the succeeding year. These proportions were applied to the missing year to estimate the credit/ethnic enrollments.**

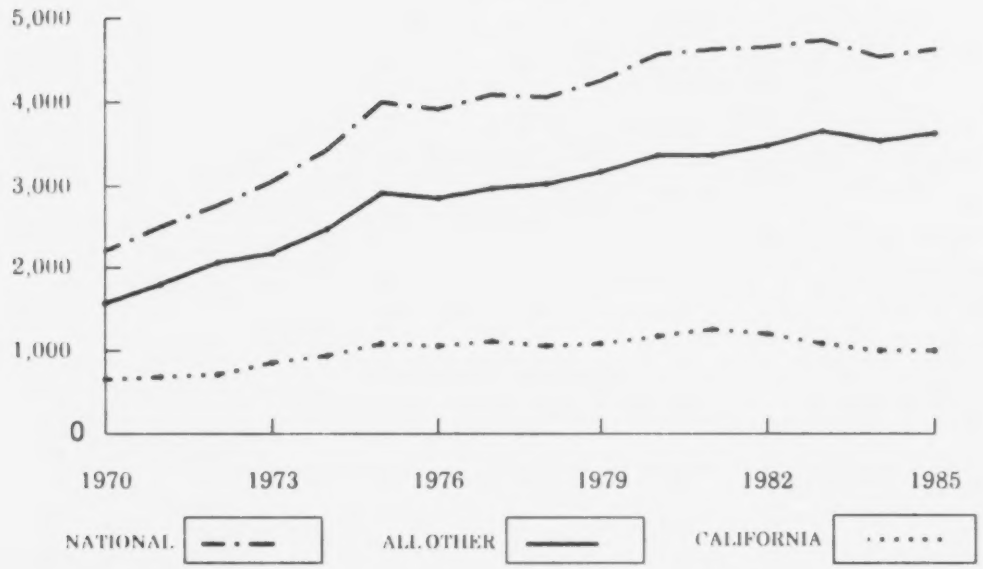
## APPENDIX C

## STUDY OF FEE IMPACT: PROGRESS REPORT
## NATIONAL DATA

### Enrollment Trends

Since 1970, credit enrollment in community colleges in other states has grown at more than twice the rate as California. (See Figure 1 and Table 1.) California

Figure 1
COMMUNITY COLLEGE CREDIT
ENROLLMENT
(in 000's)




enrolled 22% of the nation's community college students by 1985, although this figure was down from 28% in the early 1970s and 27% as recently as 1981. Only in 1976 and 1984 did community college enrollments in other states decline. These declines were less than corresponding declines in California, however.

In 1984, those conditions thought to impact enrollment were changing in other states in ways that were generally similar to California:

| | Percent Change California 1983 to 1984 | Other States Percent Change 1983 to 1984 |
|---|---|---|
| Adult Population | +1.6 | +1.3 |
| High School Graduates | -1.4 | -3.7 |
| Student Costs | +11.0 | N/A |
| Average Annual Unemployment | -17.4 | -20.3 |
| Per Capita Income | +9.1 | +9.7 |
| Total Credit Enrollment | -7.5 | -3.7 |
| Full-Time Enrollment | -6.2 | -6.9 |
| Part-Time Enrollment | -8.5 | -0.6 |

The enrollment decline elsewhere was just over half the decline that took place in California and, by contrast, was confined to full-time enrollment (see Table 2). This would appear to be attributable to the continuing decline in high school graduates as well as an improving economy (declining unemployment with potential students returning to work and either not enrolling or enrolling part-time).

The greater loss in California, particularly among part-time students, could be explained by the first-time imposition of a fee that impacted students taking 6 to 11 units the most.

After substantial increases in the late 1970s, minority enrollments in community colleges have decreased during the first half of the 1980s (see Table 3). This is due primarily to minority losses in California community colleges over the same period (see Table 4). California community colleges now enroll two-thirds of the Asians and nearly half of the Hispanics attending the nation's community colleges. Black enrollment in California community colleges declined by more than one-fourth between 1980 and 1984, a greater rate of decline than in other states. This may be due, in part, to the impact of the first-time enrollment fee in 1984. At the same time, enrollment of White students declined in California and increased elsewhere.

Despite the recent enrollment declines, California still enrolled a greater proportion of its adult population (1of every 17) than any other state in the Fall 1984 (Table 5). The next closest state is Arizona where 1 in 19 adults are enrolled, while the national average is 1 in 52.

## Fees

Annual fees charged to full-time students by community colleges across the country are displayed also in Table 5. The average (median) charge among the states in Fall 1984 was $604. This is up by one-third from the level reported for Fall 1980: $446 per student.

Despite its new enrollment fee, California continued to charge the least of any state in 1984. Hawaii was the next lowest at $245 and the highest average charge among those states with an appreciable number of community colleges was Ohio at $1,374 per student.

## Total Costs

Who bears the cost of community college education under current policy? To assess this question requires that all costs, both those of the college and those of the student, be considered.

College costs are well documented. During 1985-84, California community colleges spent an estimated $2,548 per ADA -- $1,500 per enrolled student -- on credit instruction, student services, and other supporting services.

Student costs can be estimated from data collected in the FRC surveys. Direct, out-of-pocket costs facing students include fees, transportation, books and supplies, and child care. (Housing and food are excluded, since they would be incurred even if an individual were not a student.)

Added to the direct costs facing students are the costs represented by the opportunities for work and other pursuits that are lost because of the time needed for commuting, class attendance and studying. Since four of five community college students work full or part-time, it appears they forego other pursuits that can't be valued in terms of dollars.

Students responding to the FRC survey report spending an average of $436 during 1984-85 on the direct, out-of-pocket costs described above; $354 for books and supplies, transportation and child care, along with $82 for fees. No estimates are available for the value of foregone opportunities. These costs were adjusted by a financial aid subsidy which, for Pell Grants -- the major component of aid -- averaged $50 per student.

Thus, under current policy, California community college students support about one-fifth (probably more, if foregone opportunities could be included) of the total annual costs of their education:

| | | |
|---|---|---|
| Student cost: | Direct, out-of-pocket | $ 436 |
| | Foregone opportunities | ? |
| | Less financial aid | - 50 |
| | Total | $ 386 |
| Public cost: | Institutional cost | $ 1,500 |
| | Plus financial aid | 50 |
| | Less fee | - 64 |
| | Total | $ 1,486 |

This may be contrasted with the practice of other community colleges elsewhere in the country. During 1984-85, the average (median) annual fee charge per full-time student in community colleges in states other than California was $602. During that same year, it is estimated that $219 per student in the form of Pell Grants (the bulk of financial aid) was distributed to community college students outside California. Assuming that the other costs per full-time student for books and supplies, transportation, and child care in other states were not substantially different than those in California ($642) that year, the approximate cost to the full-time student elsewhere can be estimated at $1,242.

Institutional costs in community colleges outside California are estimated to have been about $3,400 per FTE or full-time student during 1984-85. Taking these data, the distribution of total community college costs between students and the public can be calculated for states other than California. In general, full-time students support one-fourth of the total cost. It is possible that part-time students support more than that proportion of their costs, depending upon the way their fees are assessed in other states:

| | | |
|---|---|---|
| Student Cost: | direct, out-of-pocket | $1,242 |
| | foregone opportunities | ? |
| | less financial aid | >219 |
| | total | >1,023 |
| Public Cost: | institutional cost | $3,400 |
| | plus financial aid | >219 |
| | less fee | 602 |
| | total | >3,107 |

## Table 1
COMMUNITY COLLEGE CREDIT ENROLLMENT TRENDS
UNITED STATES AND CALIFORNIA
1970 TO 1986
( in 000s)

| FALL YEAR | NATIONAL | % CHANGE | CALIFORNIA | % CHANGE | ALL OTHER | % CHANGE |
|---|---|---|---|---|---|---|
| 1970 | 2,223 | | 652 | | 1,571 | |
| 1971 | 2,491 | | 695 | | 1,797 | |
| 1972 | 2,772 | 11.3 | 724 | 4.3 | 2,074 | 14.0 |
| 1973 | 3,032 | 9.4 | 853 | 17.7 | 2,179 | 6.4 |
| 1974 | 3,429 | 13.1 | 960 | 12.5 | 2,469 | 13.3 |
| 1975 | 4,002 | 16.7 | 1,104 | 15.0 | 2,898 | 17.4 |
| 1976 | 3,917 | -2.1 | 1,075 | -2.7 | 2,842 | -1.9 |
| 1977 | 4,079 | 4.1 | 1,118 | 4.0 | 2,961 | 4.2 |
| 1978 | 4,065 | -0.3 | 1,049 | -6.2 | 3,016 | 1.9 |
| 1979 | 4,250 | 4.6 | 1,101 | 5.0 | 3,149 | 4.4 |
| 1980 | 4,556 | 7.2 | 1,190 | 8.1 | 3,366 | 6.9 |
| 1981 | 4,630 | 1.6 | 1,254 | 5.4 | 3,376 | 0.3 |
| 1982 | 4,666 | 0.8 | 1,188 | -5.3 | 3,478 | 3.0 |
| 1983 | 4,747 | 1.7 | 1,086 | -8.6 | 3,661 | 5.3 |
| 1984 | 4,534 | -4.5 | 1,005 | -7.5 | 3,529 | -3.7 |
| 1985 | 4,640 | 2.3 | 1,004 | -0.1 | 3,629 | 2.8 |
| 1986 (EST.) | | | | | | |
| TOTAL CHANGE | 2,417 | 108.7 | 352 | 54.0 | 2,058 | 130.9 |

SOURCE: National Center for Educational Statistics; Chancellor's Office Management Information Services. National data includes enrollment in U.S. service schools and nonresident aliens.

## Table 2
CREDIT ENROLLMENT BY UNIT LOAD
CALIFORNIA AND ALL OTHER STATES
(in 000s)

| | FULL-TIME | | | | PART-TIME | | | |
|---|---|---|---|---|---|---|---|---|
| YEAR | ALL OTHER | % CHANGE | CALIF | % CHANGE | ALL OTHER | % CHANGE | CALIF | % CHANGE |
| 1970 | 882 | 10.5 | 283 | 9.2 | 689 | 19.6 | 369 | 7.4 |
| 1971 | 995 | 12.8 | 296 | 4.5 | 796 | 15.5 | 399 | 8.1 |
| 1972 | 1,055 | 6.0 | 285 | 3.7 | 976 | 22.6 | 440 | 10.1 |
| 1973 | 1,129 | 7.0 | 303 | 6.4 | 1,030 | 5.5 | 550 | 25.1 |
| 1974 | 1,185 | 5.0 | 324 | 7.0 | 1,260 | 22.3 | 635 | 15.7 |
| 1975 | 1,389 | 17.2 | 372 | 14.6 | 1,477 | 17.2 | 732 | 15.3 |
| 1976 | 1,336 | -3.8 | 328 | -11.7 | 1,472 | -0.3 | 747 | 1.9 |
| 1977 | 1,338 | 0.1 | 316 | -3.6 | 1,586 | 7.7 | 802 | 7.4 |
| 1978 | 1,273 | -4.9 | 285 | 9.8 | 1,706 | 7.6 | 764 | -4.7 |
| 1979 | 1,420 | 11.5 | 283 | -0.8 | 1,695 | 0.6 | 818 | 7.1 |
| 1980 | 1,483 | 4.4 | 296 | 4.6 | 1,883 | 11.1 | 894 | 9.4 |
| 1981 | 1,440 | -2.9 | 308 | 4.1 | 1,935 | 2.8 | 946 | 5.8 |
| 1982 | 1,463 | 1.6 | 309 | 0.3 | 2,010 | 3.9 | 879 | -7.2 |
| 1983 | 1,539 | 5.2 | 290 | -6.1 | 2,101 | 4.5 | 795 | -9.6 |
| 1984 | 1,433 | -6.9 | 272 | -6.2 | 2,089 | -0.6 | 733 | -8.5 |
| 1985 | | | 261 | -3.3 | | | 743 | 1.4 |

SOURCE: Chancellor's Office Management Information Services and NCES. National data includes enrollment in U.S. service schools and nonresident aliens.

## Table 3

TRENDS IN TOTAL CREDIT ENROLLMENT OF HIGHER EDUCATION BY LEVEL OF INSTITUTION AND RACE/ETHNICITY: FALL 1976 TO FALL 1984

(in 000's)

| RACE/ETHNICITY AND CITIZENSHIP | NUMBER ENROLLED | | | 1976-1980 % CHANGE | NUMBER ENROLLED | | 1980-1984 % CHANGE |
|---|---|---|---|---|---|---|---|
| | 1976 | 1978 | 1980 | | 1982 | 1984* | |
| Four-Year Institutions | 7,090 | 7,187 | 7,548 | 6.5 | 7,629 | | |
| White, Non-Hispanic | 5,984 | 6,013 | 6,259 | 4.6 | 6,289 | | |
| Total Minority | 930 | 973 | 1,048 | 12.7 | 1,070 | | |
| Black, Non-Hispanic | 603 | 611 | 633 | 5.0 | 611 | | |
| Hispanic | 173 | 190 | 216 | 29.0 | 228 | | |
| Asian or Pacific Islander | 118 | 137 | 162 | 37.3 | 193 | | |
| American Indian/ Alaskan Native | 35 | 35 | 37 | 5.7 | 38 | | |
| Non-Resident Alien | 176 | 200 | 241 | 36.9 | 269 | | |
| Two-Year Institutions | 3,880 | 4,028 | 4,490 | 15.7 | 4,699 | 4,756 | 5.9 |
| White, Non Hispanic | 3,077 | 3,167 | 3,532 | 14.8 | 3,657 | 3,818 | 8.1 |
| Total Minority | 761 | 810 | 894 | 17.5 | 981 | 873 | 2.3 |
| Black, Non Hispanic | 429 | 443 | 468 | 9.1 | 483 | 418 | -10.7 |
| Hispanic | 210 | 227 | 255 | 21.4 | 291 | 262 | 2.7 |
| Asian or Pacific Islander | 79 | 97 | 124 | 57.0 | 158 | 152 | 22.6 |
| American Indian/ Alaskan Native | 41 | 43 | 47 | 14.6 | 49 | 41 | -12.8 |
| Non-Resident Alien | 42 | 52 | 64 | 52.4 | 61 | 65 | -1.6 |
| Total | 10,970 | 11,215 | 12,038 | 9.7 | 12,328 | | |
| White | 9,061 | 9,180 | 9,791 | 8.1 | 9,946 | | |
| Total Minority | 1,691 | 1,783 | 1,942 | 14.8 | 2,051 | | |
| Black | 1,032 | 1,054 | 1,101 | 6.7 | 1,094 | | |
| Hispanic | 383 | 417 | 471 | 23.0 | 519 | | |
| Asian/Pacific Islander | 197 | 234 | 286 | 45.2 | 351 | | |
| Native American | 76 | 78 | 84 | 10.5 | 87 | | |
| Non-Resident Alien | 218 | 252 | 305 | 39.9 | 330 | | |

NOTE: Excludes enrollment in U.S. Service Schools. Numbers in thousands; percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, Office for Civil Rights, unpublished tabulations (December 1983) and National Center for Educational Statistics, Opening Fall Enrollment, Fall 1982, unpublished tabulations (December 1983).

*1984 data were supplied via telephone from the American Council on Education.

## Table 4
NATIONAL AND CALIFORNIA TRENDS
IN TWO-YEAR COLLEGE CREDIT ENROLLMENT BY ETHNICITY
(in 000s)

| CATEGORY | NATIONAL (EXCEPT CALIFORNIA) 1980 | 1982 | 1984 | 1980-84 % CHANGE | CALIFORNIA 1980 | 1982 | 1984 | 1980-84 % CHANGE |
|---|---|---|---|---|---|---|---|---|
| TOTAL TWO YEAR | 3,236 | 3,450 | 3,686 | 13.9 | 1,190 | 1,188 | 1,005 | -15.5 |
| WHITE & OTHER | 2,606 | 2,845 | 3,136 | 17.1 | 853 | 812 | 682 | -20.0 |
| TOTAL MINORITY | 557 | 605 | 550 | -1.3 | 337 | 376 | 323 | -4.2 |
| BLACK | 360 | 377 | 339 | -5.8 | 108 | 106 | 79 | -26.9 |
| HISPANIC | 126 | 147 | 140 | -11.1 | 129 | 144 | 122 | -5.4 |
| ASIAN/PACISL. | 42 | 52 | 45 | 7.1 | 82 | 106 | 107 | 30.5 |
| AMER IND | 29 | 28 | 26 | -10.3 | 18 | 19 | 15 | -16.7 |

SOURCE: Chancellor's Office Management Information Services and NCES. For comparison purposes with Table 3, it should be noted that "total" national figures in Table 4 do not include nonresident aliens.

## Table 5
## NATIONAL PUBLIC COMMUNITY COLLEGES
## ENROLLMENT AND FEES
## FALL 1984

| STATE | ANNUAL FEES[1] AVG. | RANK LOW/HIGH | LOW | HIGH | ENROLLMENT[2] NO. | PART. RATE[3] % | RANK | NO. COLLEGES |
|---|---|---|---|---|---|---|---|---|
| ALABAMA | $ 527 | 15 | $ 155 | $ 622 | 55,065 | 1.92 | 25 | 44 |
| ALASKA | 592 | 23 | 334 | 643 | 16,729 | 4.95 | 3 | 10 |
| ARIZONA | 515 | 13 | 120 | 3,500 | 114,107 | 5.20 | 2 | 16 |
| ARKANSAS | 510 | 12 | 432 | 600 | 12,324 | 0.73 | 46 | 9 |
| CALIFORNIA | 104 | 1 | 99 | 142 | 1,086,119 | 5.73 | 1 | 106 |
| COLORADO | 739 | 36 | 402 | 922 | 50,445 | 2.18 | 21 | 15 |
| CONNECTICUT | 549 | 19 | 280 | 654 | 41,999 | 1.75 | 28 | 17 |
| DELAWARE | 627 | 28 | 627 | 627 | 7,130 | 1.56 | 32 | 1 |
| FLORIDA | 557 | 20 | 432 | 1,215 | 211,150 | 2.50 | 15 | 28 |
| GEORGIA | 725 | 34 | 675 | 925 | 37,898 | 0.91 | 42 | 16 |
| HAWAII | 246 | 3 | 240 | 255 | 21,185 | 2.82 | 12 | 7 |
| IDAHO | 632 | 29 | 614 | 650 | 4,076 | 0.61 | 48 | 2 |
| ILLINOIS | 560 | 21 | 336 | 864 | 356,607 | 4.24 | 4 | 50 |
| INDIANA | 1,128 | 45 | 819 | 1,750 | 34,391 | 0.87 | 43 | 14 |
| IOWA | 904 | 40 | 630 | 1,233 | 40,297 | 1.90 | 26 | 18 |
| KANSAS | 477 | 10 | 0 | 790 | 42,827 | 2.40 | 17 | 21 |
| KENTUCKY | 546 | 17 | 468 | 1,124 | 25,120 | 0.94 | 41 | 14 |
| LOUISIANA | 474 | 9 | 394 | 550 | 13,908 | 0.45 | 49 | 5 |
| MAINE | 931 | 41 | 645 | 1,592 | 9,495 | 1.12 | 38 | 8 |
| MARYLAND | 701 | 32 | 540 | 1,089 | 98,276 | 3.02 | 10 | 17 |
| MASSACHUSETTS | 953 | 43 | 734 | 2,445 | 67,961 | 1.54 | 34 | 17 |
| MICHIGAN | 707 | 33 | 456 | 1,002 | 204,351 | 3.11 | 8 | 28 |
| MINNESOTA | 1,082 | 44 | 882 | 1,688 | 42,465 | 1.40 | 36 | 22 |
| MISSISSIPPI | 481 | 11 | 200 | 620 | 38,971 | 2.17 | 22 | 17 |
| MISSOURI | 471 | 8 | 225 | 576 | 57,160 | 1.55 | 33 | 13 |
| MONTANA | 418 | 6 | 390 | 450 | 3,584 | 0.62 | 47 | 3 |
| NEBRASKA | 600 | 24 | 480 | 872 | 21,328 | 1.84 | 27 | 9 |
| NEVADA | 547 | 18 | 0 | 660 | 20,534 | 3.04 | 9 | 4 |
| NEW HAMPSHIRE | 1,389 | 48 | 1,232 | 1,500 | 5,248 | 0.74 | 45 | 5 |
| NEW JERSEY | 785 | 38 | 568 | 875 | 113,232 | 2.01 | 23 | 19 |
| NEW MEXICO | 540 | 16 | 20 | 3,935 | 23,069 | 2.34 | 19 | 16 |
| NEW YORK | 1,231 | 46 | 583 | 1,485 | 269,053 | 2.02 | 22 | 43 |
| NORTH CAROLINA | 188 | 2 | 60 | 240 | 113,573 | 2.49 | 16 | 57 |
| NORTH DAKOTA | 893 | 39 | 630 | 1,150 | 7,633 | 1.57 | 31 | 6 |

## Table 5
(continued)
NATIONAL PUBLIC COMMUNITY COLLEGES
ENROLLMENT AND FEES
FALL 1984

| STATE | ANNUAL FEES[1] AVG. | RANK LOW/HIGH | LOW | HIGH | ENROLLMENT[2] NO. | PART RATE[3] % | RANK | NO COLLEGES |
|---|---|---|---|---|---|---|---|---|
| OHIO | $1,374 | 47 | 575 | 2,874 | 152,655 | 1.94 | 24 | 52 |
| OKLAHOMA | 393 | 5 | 184 | 568 | 55,870 | 2.36 | 18 | 15 |
| OREGON | 604 | 25 | 540 | 690 | 67,142 | 3.42 | 7 | 15 |
| PENNSYLVANIA | 933 | 42 | 750 | 1,144 | 91,617 | 1.02 | 40 | 14 |
| RHODE ISLAND | 740 | 37 | 740 | 740 | 12,317 | 1.68 | 29 | 1 |
| SOUTH CAROLINA | 618 | 26 | 175 | 940 | 37,071 | 1.58 | 30 | 21 |
| SOUTH DAKOTA | 0 | -- | 0 | 0 | -- | -- | -- | 0 |
| TENNESSEE | 520 | 14 | 516 | 526 | 48,677 | 1.41 | 35 | 14 |
| TEXAS | 258 | 4 | 80 | 461 | 330,185 | 2.93 | 11 | 58 |
| UTAH | 543 | 30 | 243 | 786 | 10,473 | 1.03 | 39 | 5 |
| VERMONT | 1,697 | 49 | 1,030 | 2,364 | 2,936 | 0.76 | 44 | 2 |
| VIRGINIA | 619 | 27 | 549 | 980 | 108,454 | 2.58 | 14 | 24 |
| WASHINGTON | 569 | 22 | 194 | 705 | 129,857 | 4.08 | 5 | 27 |
| WEST VIRGINIA | 660 | 31 | 400 | 922 | 18,390 | 1.30 | 37 | 10 |
| WISCONSIN | 736 | 35 | 464 | 1,023 | 95,082 | 2.73 | 13 | 34 |
| WYOMING | 419 | 7 | 384 | 445 | 13,014 | 3.71 | 6 | 7 |
| MEDIAN | 604 | | 439 | 872 | 41,999 | 1.92 | | 15 |
| MEAN | 674 | | 436 | 1,069 | 90,634 | 2.14 | | 19.9 |

SOURCE: 1985 Community, Technical and Junior College Directory, American Association of Community and Junior Colleges, Washington, D.C.

1 Annual Fees are defined as: tuition and required fees for a full-time student for the full 1984-85 academic year, and where applicable are for those students living within the state and within the institutional district.

2 Enrollment is defined as: the total headcount of full-time and part-time students enrolled for credit courses only.

3 The participation rate is divided by adult (18 years and older) population into the enrollment of each state. State population estimates are from the U.S. Current Population Survey, 1985.

## REFERENCES FOR APPENDIX C

Unless otherwise noted, the following references were used to derive the data in Appendix C:


*Current Population Survey Report, California, 1983 and 1984*, California State Census Data Center.

*Current Population Survey, United States, 1986*, United States Department of Commerce, Bureau of the Census.

The information on high school graduates was provided by the Population Research Unit, California State Department of Finance.

*Statistical Abstract of the United States, 1986*, United States Department of Commerce, Bureau of the Census, Table #249, p. 149.

*Statistical Abstract of the United States, 1986*, United States Department of Commerce, Bureau of the Census, Table #265, p. 156.

*Annual Planning Information, California, 1986-87*, Estimates and Economic Research Group, Employment Data and Research Division, Claifornia Employment Development Department, May 1986, Table 39, p. 105.

*Annual Planning Information, California, 1986-87*, Estimates and Economic Research Group, Employment Data and Research Division, Claifornia Employment Development Department, May 1986, Table 36, p. 100.

*Current Population Survey Report, California, 1983 and 1984*, California State Census Data Center.

*Statistical Abstract of the United States, 1986*, United States Department of Commerce, Bureau of the Census, Table #762, p. 455.

*1985 Community, Technical, and Junior College Directory*, American Association of Community and Junior Colleges, pp. 24-68.

Nathan Dickmeyer and Ana Maria Cirino, *Comparative Financial Statistics for Public Community and Junior Colleges*, February 1986, National Association of College and University Business Officers.

## APPENDIX D

## STUDY OF FEE IMPACT: PROGRESS REPORT ANALYSIS OF DISTRICT CHANGES

### BACKGROUND

Legislation (AB 1XX, 1984) established a mandatory enrollment fee of $50 per semester ($100 per year) for those California community college students taking 6 or more credit units and $5 per unit for those taking less than 6 units. (Students taking noncredit classes do not pay the fee.)

This mandatory fee was implemented beginning in the Fall 1984 and, at the same time, ten permissive fees for instructional materials, health, and other student services were eliminated. Among the student fees that colleges were allowed to continue were those for dropping courses, for parking, and for field trips and a variety of other purposes.

During the year prior to the new fee (1983-84), the 70 community college districts charged an average of $46 per student through the more than 20 permissive fees. This average charge varied substantially among districts, however: from a low of less than $1 per student in one district to a high of more than $70.

Since these permissive fees had varied substantially from district to district, the net change in cost to students in 1984 from the uniform enrollment fee also varied substantially from district to district. Across the state, the average fee in 1984-85 nearly doubled from its prior year level: an increase of $42 per students. However, one district actually reduced its fee collections per student by $8 in making the policy change, while among the other 69 districts increases ranged from $3 to $71:

| Number of Districts | Range of Fee increases (dollars per student per year) | Average Enrollment Change per District (percent) |
|---|---|---|
| 14 | $-8.04 - 30.95 | -4.0 |
| 14 | 32.48 - 39.75 | -6.3 |
| 14 | 40.26 - 46.38 | -7.2 |
| 14 | 46.58 - 56.16 | -7.7 |
| 14 | 56.47 - 70.51 | -10.3 |

This variation in fee and enrollment change among districts provides one basis for analyzing the possible impact of the fee. If the fee had an impact, then (other things being equal) those districts increasing their fees the most would be expected to experience the largest enrollment losses. Since factors other than the fee could have contributed to the enrollment loss (other things were not equal), the following analysis relies on a statistical technique, multiple regression, where the specific impact of the fee change on enrollment can be examined while holding the impact of other factors constant.

The reasons behind decisions about college-going are many and complex. Aside from an increase in cost for students (from the new fee), other factors that might have contributed to changes in district enrollments in 1984 include:

(a) *improved employment conditions*

As the economy improves (as it did in 1984) and jobs become more plentiful, potential students return to work and, since there is less time for college attendance and less need for job training, enrollment drops. The number of unemployed Californians dropped by 9% that year.

(b) *declines in high school graduates*

The number of California high school graduates dropped by 4,400 or nearly 2% in 1984.

(c) *earlier-starting academic calendars*

Virtually all colleges that have changed calendars to an earlier start have found that their enrollments declined because of that change. Seven of 70 districts moved to earlier starting calendars in the Fall 1984.

(d) *adoption of more rigorous academic policies*

More rigorous practices on student probation and dismissal were implemented between 1982 and 1984 by most districts.

(e) *fee changes and recruiting by the University and State University*

Student fees were reduced at both the University and State University in the Fall 1984 and it has been asserted that both segments more actively recruited eligible students as first-time freshmen that year as well.

(f) *fiscal incentives faced by districts*

The 1984-85 funding mechanism contained powerful incentives for districts to recapture the enrollment they had lost in 1983-84.

(g) *course-scheduling changes*

Increased numbers of sections typically result in increased enrollments. Districts increased their course sections by 4% in 1984.

Together with the fee increase, factors (a) through (e) would combine to produce enrollment losses which would be compensated by the action of factors (f) and (g). Also exerting a compensating influence was the increase in adult population (+1.6% statewide) which normally would lead to an enrollment increase, particularly since it is one of the factors which control district budget growth.

Another important compensating factors was the Board of Governors financial aid program (BFAP). Also authorized by AB 1XX (1984), this program enabled the Board to distribute $15 million in fee waivers for those students on public assistance and in financial aid grants for those individuals otherwise unable to pay the new fee. The Board established regulations under which the districts eventually distributed $4.9 million in 144,000 awards to low income students during 1984-85.

The following analysis attempts to incorporate all the factors described above.

## STATISTICAL MODEL

The statistical model used in this analysis is in the regression form:

$$Y = b_0 + b_1X_1 + b_2X_2 + ...b_nX_n + e$$

where,

$Y$ = the dependent variable
(The dependent variable is the factor whose variation the model seeks to explain. In all equations of the model examined in this analysis, the dependent variable is the change in community college enrollment.)

$b_0$ = the intercept term for each equation

$b_1$ = the estimated regression coefficient for each independent variable
(Regression coefficients measure the relationship of each independent or "explanatory" variable and the dependent variable -- district enrollment change -- when the impact of all other variables is held constant. A plus sign on the coefficient means that both dependent and independent variables change in the same direction. A negative sign indicates they change in opposite directions.)

$x_1$ = the independent or explanatory variables
(Independent variables are selected and incorporated in the model to measure those factors thought most likely to cause variation in the dependent variable. Table 1 lists the variables examined in this analysis together with their expected sign or relationship to the dependent variable, enrollment change.)

e = an error term
(The calculated error term provides a test of the overall "fit" or predictability of the model.)

Other important statistics resulting from the model include the coefficient of determination ($R^2$), F-Ratio, and t-statistic. $R^2$ measures the portion of total variation in the dependent variable (enrollment change) that is explained by the independent variables in the model. The F-Ratio tests the hypothesis that all regression coefficients are zero (except the intercept). It is a test of the overall predictability of the regression equation and is calculated by dividing the mean square for the regression equation by the mean square of the error term. The t-statistic is a measure of the significance of each regression coefficient. It is the estimated regression coefficient divided by the standard error of estimate for that coefficient.

A word of caution is in order. While multiple regression is the most powerful statistical tool for this kind of analysis, it does have certain limitations. Problems obviously arise if important variables are left out of the model or if the variables that are included aren't specified correctly or if the data for the variables are inaccurate. Excluding those possibilities, problems with regression models can arise also from situations in which the independent variables are highly related (correlated) to one another. Finally, the conditions being analyzed were not experimentally controlled. The model must assume that the factors are fixed with respect to the dependent variable. Other important assumptions are that errors are normally distributed and that the computed statistics have the proper sampling distributions for hypothesis testing so that the significance of model results can be accurately portrayed. The following discussion will treat these problems and assumptions whenever they appear to be affecting the results.

## RESULTS

The results of the regression analyses displayed in Tables 2, 3, 4, and 5 indicate that most forms of the model "explain" three-fifths to four-fifths of the variation in district enrollment changes. The several exceptions to this are noted and explained below. Thus, most of the important factors appear to have been included in this analysis. (Data used for analyses in this Appendix are available upon request.)

*The Fee*

Equations in Table 2 show that with other factors held constant, changes in total district enrollments are negatively related to changes in student fees, at the 1% level of statistical significance. (A 1% level of significance means that the odds are one in 100 that the results are due purely to chance.) Those districts increasing their student fees the most, other things being equal, experienced the largest enrollment declines. The new fee did impact enrollment.

One way of assessing the validity of these results is to estimate the "cost-elasticity" of enrollment that is suggested by the regression statistics. Cost-elasticity measures students' response to the fee and is calculated as follows:

$$\text{elasticity} = \frac{\text{percent change in enrollment}}{\text{percent change in cost due to the fee}}$$

The Field Research Corporation (FRC) survey of community college students shows that the average student enrolled for credit reported having spent $392 for the "direct" costs of fees, books and supplies, transportation, and child care during the 1983-84 academic year. Using this direct cost as the basis (room and board costs are excluded from this since they are incurred whether or not an individual is a student), it is possible to calculate the cost-elasticity from the regression results. Regression coefficients for the fee change (see Equation 2 in Table 2) indicate that $1 more in fees resulted in an enrollment loss of about 29 students from an average district enrollment the prior year of 15,509.

The calculation:

$$\text{elasticity} = (-29/15{,}509) \div (1/392) = -0.73$$

The specific interpretation of this figure is that when the influence of other factors is held constant, a 10% increase in direct costs facing the student results in a 7% loss in enrollment.

This cost-elasticity value of -0.7 is consistent with the higher elasticity values found in studies by Bishop and Van Dyk (1977), McPherson (1978), the Chancellor's Office (1981, 1985a), and McIntyre (1982). Several of these studies deal with four-year students. In general, community college students appear to respond more to a given increase in cost than do four-year students and, therefore, exhibit higher elasticities. This is probably because community college students have lower average incomes, less prior education, and are more often self-supporting than are four-year students.

The relatively high cost-elasticities found in this study for the change in 1984 community college enrollment may be due also to the psychological impact of a major new, first-time student fee. It seems likely that continuous increases, even if of a

similar level, would engender less reaction over time as students become aware and accustomed to the change and the need to secure financial aid.

*Employment and High School Graduates*

Also affecting Fall 1984 enrollments significantly, but to a somewhat lesser degree than the fee, were the numbers of individuals returning to work and the decline in high school graduates (see Table 2).

Between July 1983 and July 1984, more than 100,000 unemployed Californians returned to work, thereby leading to enrollment declines. The regression coefficient of 0.44 for changed unemployment (CUNE) indicates an "unemployment elasticity" of

$$\text{elasticity} = (0.44/15{,}509) \div (1/16{,}210) = 0.45$$

This suggests that for every 10% decline in unemployment, districts experienced a 5% average decline in enrollment.

The number of California high school graduates declined (see variable CHSG in the model) by 4,400 or 2% between 1983 and 1984. the "high school graduate" elasticity of community college enrollment may be calculated also using the regression coefficient of 5.97 in Equation 2 of Table 2:

$$\text{elasticity} = (5.97/15{,}509) \div (1/3{,}231) = 1.27$$

Consequently, this variable contributed a modest (though statistically significant) way to enrollment losses. There was considerable variation in the change in high school graduates in different regions of the state. Even though there was an overall decrease in high school graduates, areas served by 21 of 70 districts reported increases in high school graduates.

*Other Variables*

The regression coefficient for calendar change (CCAL in Table 2) was negative; that is, those districts shifting to earlier-starting calendars lost enrollment. The significance of this variable was less than that of the new fee, unemployment, or the change in high school graduates, however.

An effort to measure and analyze the possible impact of University (UC) and State University (CSU) fee reductions and what are believed to have been more rigorous steps to recruit eligible high school students as first-time freshmen in the Fall 1984 was unsuccessful. Use of institutional proximity (distance from a community college to the nearest UC or CSU campus, PROX) to serve as a proxy measure of the

influence of UC and CSU policies, while statistically significant, carried the wrong sign and, therefore, does not measure what was intended.

The variable intended to measure district fiscal ability, specified as the percent that reserves are of total budget (PRES), is positively related to the change in full-time enrollment (see Table 3). Districts with relatively higher fiscal ability (more reserves) appear to have been somewhat better able to maintain or increase full-time enrollments than were districts with few reserves. This appears reflected also in the significant positive relationship between changes in course sections (CSEC) and full-time enrollment (see Equation 1 in Table 3).

Seven of every ten districts increased their course section offerings in Fall 1984: a statewide increase of 4%. This variable (CSEC) did not prove to be significantly related to half- or part-time enrollment change, however. Moreover, excluding this variable (see Table 2) makes no appreciable difference in the overall results. Thus, district efforts to increase enrollments in 1984 by adding courses appear to have been successful only with full-time students.

The variable that is intended to measure district fiscal incentive, an index of ADA at risk (RISK), is significant, but carries the wrong sign. Districts with the greatest incentive to regain enrollment lost in 1983 (and thereby avoid revenue losses in 1984) surprisingly experienced the largest enrollment losses. Rather than measure fiscal incentive, RISK appears to serve as a proxy for conditions that led to enrollment losses in 1983 and continued into 1984.

The change in district adult population (CAPOP), a measure both of the district's changing demography and budget capability, was not significantly related to enrollment change.

*Income and Ability to Pay*

As expected, differences in the average household incomes (HINC) of individuals residing in different districts did relate significantly to enrollment changes. Districts with lower income populations experienced the largest enrollment losses. This raises a question about the equity of the new fee, where equity is defined in terms of ability to pay.

In terms of ability to pay, the new fee policy appears more equitable for similarly situated students in different districts. In 1983-84, prior to the new fee, community colleges charged an average of $39 per student across the state, but the variation among districts was substantial:

1983-84 Fee Charges

| | |
|---|---|
| Average Charge | $ 39 |
| Standard Deviation | 20 |
| Coefficient of Variation | .51 |

Implementation of the new enrollment fee, together with elimination of the ten permissive fees, substantially reduced this variation:

1984-85 Fee Charges

| | |
|---|---|
| Average Charge | $ 83 |
| Standard Deviation | 15 |
| Coefficient of Variation | .18 |

It could be argued that districts levied fees in 1983-84 with the economic circumstances of their students in mind. The level of fees that year did correlate moderately with the household income of district residents ($r = +.235$). Districts whose residents reported higher (lower) incomes charged higher (lower) fees. Following implementation of the new fee (as adjusted by the Board's financial aid program), however, this same correlation increased to $r = +.386$. The new fee structure would appear to be more equitable than the old structure. That is, students in districts reporting lower incomes paid a lower average fee after the 1984 change in policy than they paid before.

*Financial Aid*

The Board of Governors financial aid program (BFAP) was to help preserve access by targeting aid to low income students to offset the added cost of the new fee. A negative correlation of Board aid per student and district household income ($r = -.543$) shows that where the income of district residents was lower, more financial aid per student was delivered. The regression results, however, suggest that the impact of the BFAP was modest and, in any case, less than expected.

BFAP regulations distributed funds to districts on the basis of estimates of household income derived from the U.S. Census, among other measures. Districts, in turn, report having distributed $4.9 million through 144,000 awards during 1984-85, an average award of $34.

This aid amounted to an offset of $6 from the $48 total fee increase experienced by the average community college student across the state. This average offset varied from $1 to $31 per student in different districts depending on the socioeconomic characteristics of the area served. Incorporating the average BFAP per student in each district (Equation 3 in Table 2) makes virtually no difference in the results, however. The regression coefficient for BFAP would be expected to be positive: more

aid (other things being equal), fewer enrollment losses. However, the coefficient was negative and not statistically significant. While admittedly a gross measure, the BFAP adjustment would have been expected to curb enrollment losses, but it did not.

This finding and the fact that just one-third of the available aid was delivered suggest that the BFAP did not have the full impact expected of it.

*Urban Areas*

When the four large urban districts of Peralta, Los Angeles, San Francisco and San Diego are excluded, the power of the model is reduced and changes in unemployment and high school graduates are less related to changes in enrollment (see Equation 4, Table 2). Moreover, calendar changes are now a more important factor in the enrollment decline. Finally, the impact of fees, while still statistically significant, is reduced somewhat. The calculation for the cost-elasticity in the remaining districts:

$$\text{elasticity} = (-17/13{,}231) \div (1/392) = -0.50$$

shows a lower result than the elasticity of -0.7 which results when all districts are included. This is because students outside the four large urban areas were relatively more wealthy and able to pay the fee than were students inside the four large urban areas. Also, the mandatory enrollment fee imposed larger fee increases upon those in the large urban districts:

| | Average Fee Increase | Average Household Income, 1980 |
|---|---|---|
| four large urban districts | $ 62 | $ 15,723 |
| other sixty-six districts | 41 | 18,287 |

Larger fee increases in the four urban districts were due to the fact that these districts levied fewer of the permissive student fees prior to 1984.

The four large urban districts comprise just under one-fifth of the community colleges' total credit enrollment statewide, but accounted for one-third of the credit enrollment loss in 1984 and exhibited much higher relative enrollment losses than did the other 66 districts:

| | Percent Enrollment Loss 1983 to 1984 |
|---|---|
| four large urban districts | - 14.6 |
| other sixty-six districts | - 6.7 |

*Academic Load*

Results displayed in Table 3 show that the fee had greater impact on full-time students (those taking 12 or more credit units) and on half-time students (defined here as those taking 6 to 11 units) than the fee had on part-time students (defined here as those taking less than 6 units). A continuation of certain conditions that existed in 1983 led to decreases in part-time enrollment (see Equation 3 in Table 3). Also, as expected, improving employment conditions were of major significance to changes in part-time enrollment.

Employment also had an impact on the enrollment of full-time and half-time students, although to a lesser degree than did fee changes. Changes in course scheduling by districts had a positive impact on full-time, but not on half- or part-time enrollment. Changes in high school graduates are significantly related to changes in full- and half-time enrollment, but not to changes in part-time enrollment.

*Ethnic Distribution of Enrollment*

Results of examining the differential impact of the fee on changes in the enrollment of four major racial and ethnic groups are shown in Table 4.

The new enrollment fees shows a statistically significant relationship to changing district enrollment for all groups except Hispanics. It is not clear why changes in Hispanic enrollment were not (statistically) related to changes in fees, especially since their reported incomes (and apparent ability to pay the fee) are just marginally higher than those of Blacks whose reaction to the fee was significant. Of apparently greater importantance -- than the fee -- in determining Hispanic enrollment changes for Fall 1984 were changing employment conditions (Equation 3, Table 4).

By contrast, fees seem to have been a major deterrant to the enrollment of Black students who apparently opted to work instead of attending a community college (Equation 2, Table 4). This was especially true for Blacks in those districts whose residents report lower household incomes.

The gap between Black and Hispanic response to the fee is explained only in part by differences in the population growth rate and college-going patterns of high school graduates from the two groups. Another possible explanation may be that Black students had a greater economic need to enter the job market in 1984, rather than continue their education and that the enrollment fee forced that decision (see Appendix E).

Unexpectedly, those districts increasing their numbers of course sections did apparently succeed in enrolling more Black students than would otherwise have been the case. This was not true, however, in the case of other students.

Enrollments of both White and Asian students were affected by the fee, but less so than Blacks, and not in any specific relationship to areas of high or low income. White students, who report the highest incomes, reacted to fees more often because of preference than because of inability to pay. Asian students, by contrast, report the lowest incomes of any group, but the highest proportion of their adult population enrolled in community colleges.

*Summary of 1984 Impact*

In summary, the new fee, increased employment and decreased high school graduates all worked so as to reduce enrollment. The changes in cost from the fee appear to have had a greater impact on enrollments than did either the decreased unemployment or high school graduates:

| Variable | % Change | Elasticity Estimate | Related % Change in Enrollment |
|---|---|---|---|
| Fee (cost) | +11 | - 0.7 | - 8 |
| Unemployment | - 9 | 0.5 | - 5 |
| High School Graduates | - 2 | 1.3 | - 3 |

The elasticities here are based upon regression coefficients in Table 2. Other variables either were less significant or had compensating effects. These calculations must be viewed in a relative way since the models do not statistically explain all the variation in enrollment change that took place.

Certain unspecified conditions that led to enrollment losses in 1983 continued to contribute to losses in part-time enrollment in 1984. As expected, enrollment of those taking less than 6 units was affected by employment conditions, but not by the fee. Those who normally carry heavier academic loads were affected by the fee. Black students appear to have been affected more by the fee than were students in other racial and ethnic categories.

The new fee caused enrollment losses outside the four large urban districts of San Francisco, Los Angeles, Peralta and San Diego, but improved employment conditions and declining numbers of high school graduates were not as important outside these urban areas. Earlier starting calendars and a continuation of conditions that caused 1983 enrollment losses appear to have been more a factor in the enrollment decline for suburban and rural districts.

These results should be viewed with appropriate caution. Certain of the independent variables are highly correlated, several variables did not have the expected impact, and critical assumptions about the way data and calculated statistics are distributed may not always hold.

*Pre- and Post-Fee Evidence*

Running the model on the similar data for the pre-fee (1983) and post-fee (1985) conditions produces results that contrast with those for 1984 (see Table 5).

The model explains over one-half of the variation in district enrollment losses from Fall 1982 to Fall 1983. Of primary importance was the cut in course sections. Also of importance was the continuing decline in high school graduates. Notably, district fee changes which averaged $14 per student across the state or about a 4% increase in direct costs do not appear to have played a significant part in 1983 enrollment losses. Nor were changes in the economy a factor. This pattern is quite different than that which characterizes the 1984 enrollment loss. In the latter year, fees and other factors -- but not course section changes -- were important.

Enrollment changes in the second year of the fee are related primarily to continued changes in unemployment. Also significantly related to enrollment changes are changes in fees. While the enrollment fee did not change, drop fees and parking fees were adjusted. More important, however, were increases in the BFAP offset -- the statewide average aid increased by $3 per student. The results suggest that improved delivery of BFAP had an impact on 1985 enrollment. Decreased fee collections due to increased BFAP are significantly related to enrollment increases.

Because of time constraints, unedited data on student fee collections were used for the second year (1984-85) estimates. Slight changes in findings could occur with further refinement of the data on student charges.

Table 1

## INDEPENDENT VARIABLES USED IN REGRESSION ANALYSIS

| Variable | Expected Relationship to Enrollment Change |
|---|---|
| CFEE<br>Change in fees per student offset by Board of Governors financial aid per student. | NEGATIVE<br>Greater enrollment losses are expected where the largest fee increases take place. |
| BFAP<br>Board of Governors financial aid per student. | POSITIVE<br>Smaller enrollment losses are expected where more financial aid is delivered. |
| CCAL<br>Earlier starting calendars are either implemented (1) or not (0) by the districts. | NEGATIVE<br>Districts implementing earlier starting calendars experience larger enrollment losses. |
| CUNE<br>Change in area unemployment from July to July prior to Fall to Fall enrollment change | POSITIVE<br>Declines in unemployment lead to declines in enrollment. |
| CHSG<br>Change in area High School graduates from Spring to Spring prior to the enrollment change. | POSITIVE<br>A decline in high school graduates leads to a decline in enrollment |
| CSEC<br>Change in course sections from Fall to Fall. | POSITIVE<br>Increased course section offerings should lead to increased enrollment. |
| PRES<br>Percent that reserves are of district budgets. | POSITIVE<br>Districts with larger budget reserves are better able to increase enrollments |
| RISK<br>An index of ADA, lost in 1983, that must be recaptured in 1984 to avoid losing revenue. | POSITIVE<br>The higher the index (larger number of ADA at risk) the greater the incentive to act so as to make enrollment increase. |
| PROX<br>The distance between the nearest four-year institution to any college in the district | POSITIVE<br>The smaller the distance, the greater the impact of UC and CSU in causing enrollment losses. |
| HINC<br>Median household income for district residents from 1980 Census | POSITIVE<br>Districts whose residents have larger incomes should experience enrollment increases or at least smaller enrollment losses. |
| CAPOP<br>Annual change in district adult population. | POSITIVE<br>Districts with large adult population increases should experience enrollment increases. |

Table 2
REGRESSION RESULTS FOR CHANGE IN TOTAL ENROLLMENT BETWEEN FALL 1983 AND FALL 1984 AND EXPLANATORY VARIABLES

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| n | 63 | 69 | 69 | 65 |
| $R^2$ | .812 | .804 | .829 | .476 |
| F-Ratio | 27.4[a] | 32.0[a] | 28.7[a] | 7.4[a] |
| Intercept | -332.2 | -978.0 | -1163.1 | 500.9 |
| Regression Coefficients for Explanatory Variables (t-statistics in parentheses) | | | | |
| CFEE | -32.86 (-3.5)[a] | -28.57 (-3.4)[a] | -29.4 (-3.4)[a] | -16.52 (-2.4)[b] |
| BFAP | -- | -- | -17.77 (-0.4) | -- |
| CCAL | -1346.9 (-2.4)[b] | -940.7 (-1.9)[c] | -897.9 (-1.8)[c] | -1273.3 (-3.4)[a] |
| CUNE | 0.43 (5.1)[a] | 0.44 (5.4)[a] | 0.46 (5.4)[a] | 0.12 (1.5) |
| CHSG | 6.47 (4.6)[a] | 5.97 (4.5)[a] | 5.8 (4.3)[a] | 2.26 (1.8)[c] |
| CSEC | 0.17 (0.3) | -- | -- | -- |
| PRES | 38.9 (1.3) | 48.5 (1.5) | 42.4 (1.5)[c] | 16.6 (0.8) |
| RISK | -310.8 (-1.9)[c] | -262.7 (-1.8)[c] | -278.9 (-1.8)[c] | -372.9 (-3.3)[a] |
| PROX | -6.11 (-1.3) | -5.01 (-1.1) | -5.57 (-1.2) | -0.31 (-0.1) |
| HINC | 0.09 (2.5)[b] | 0.12 (2.8)[a] | 0.12 (2.6)[a] | -0.007 (-0.2) |
| CAPOP | -0.001 (-0.1) | -0.004 (-0.3) | -0.002 (-0.5) | -0.01 (-0.9) |

[a] Statistic is significant at 1% level ($P > 0.01$)
[b] Significant at 5% level
[c] Significant at 10% level.

Note: West Valley is not included due to missing data. Six other districts are excluded from Equation (1) due to missing data on section counts.

Table 3

REGRESSION RESULTS FOR CHANGE IN TYPES OF ENROLLMENT BETWEEN FALL 1983 AND FALL 1984 AND EXPLANATORY VARIABLES

| | (1) Full-Time Enrollment | (2) Half-Time Enrollment | (3) Part-Time Enrollment |
|---|---|---|---|
| n | 63 | 63 | 63 |
| $R^2$ | .773 | .841 | .451 |
| F-Ratio | 17.7[a] | 27.5[a] | 4.3[a] |
| Intercept | -270.2 | -228.1 | 237.7 |
| Regression Coefficients for Explanatory Variables (t-statistics in parentheses) | | | |
| CFEE | -11.06 (-3.9)a | -19.13 (-3.8)a | -2.88 (-0.5) |
| CCAL | -298.9 (-1.7)c | -709.3 (-2.4)b | -350.0 (-1.0) |
| CUNE | 0.12 (4.6)a | 0.20 (4.3)a | 0.12 (2.3)b |
| CHSG | 1.31 (3.1)a | 3.94 (5.2)a | 1.26 (1.5) |
| CSEC | 0.38 (2.5)b | -0.13 (-0.5) | -0.03 (-0.1) |
| PRES | 12.7 (1.4) | 13.8 (0.9) | 8.48 (0.3) |
| RISK | -25.8 (-0.5) | -58.3 (-0.7) | -222.5 (-2.3)b |
| PROX | -0.26 (-0.18) | -1.10 (-0.4) | -4.74 (-1.6) |
| HINC | 0.03 (2.4)b | 0.04 (1.8)c | 0.01 (0.5) |
| CAPOP | 1.8E-4 (-0.05) | 0.002 (0.2) | 0.0006 (0.08) |

a Statistic is significant at 1% level (P >0.01)
b Significant at 5% level
c Significant at 10% level

Note. West Valley is not included due to missing data. Six other districts are excluded due to missing data on section counts.

Table 4
REGRESSION RESULTS FOR CHANGE IN ENROLLMENT OF MAJOR RACIAL AND ETHNIC GROUPS BETWEEN FALL 1983 AND FALL 1984 AND EXPLANATORY VARIABLES

| | (1) Asian | (2) Black | (3) Hispanic | (4) White |
|---|---|---|---|---|
| n | 63 | 63 | 63 | 63 |
| $R^2$ | .603 | .817 | .690 | .670 |
| F-Ratio | 7.8[a] | 23.1[a] | 11.5[a] | 10.4[a] |
| Intercept | 17.5 | -664.6 | -113.4 | 701.1 |
| Regression Coefficients for Explanatory Variables (t-statistics in parentheses) | | | | |
| CFEE | -2.32<br>(-2.3)[b] | -13.0<br>(-3.1)[a] | -4.2<br>(-1.6) | -14.7<br>(-2.7)[a] |
| CCAL | -112.4<br>(-1.8)[c] | -209.1<br>(-0.8) | -87.7<br>(-0.5) | -836.1<br>(-2.6)[b] |
| CUNE | -0.009<br>(0.9) | 0.23<br>(6.0)[a] | 0.09<br>(3.8)[a] | 0.12<br>(2.4)[b] |
| CHSG | 0.35<br>(2.3)[b] | 2.58<br>(4.1)[a] | 0.61<br>(1.5) | 1.7<br>(2.1)[b] |
| CSEC | -0.27<br>(-4.9)[a] | 0.67<br>(3.0)[a] | 0.19<br>(1.3) | -0.38<br>(-1.3) |
| PRES | 3.76<br>(1.2) | 25.1<br>(2.0)[c] | 16.1<br>(2.0)[c] | 5.3<br>(0.3) |
| RISK | -34.8<br>(-2.0)[b] | -27.7<br>(-0.4) | -2.9<br>(-0.1) | -209.5<br>(-2.3)[b] |
| PROX | -0.58<br>(-1.1) | -3.0<br>(-1.4) | -1.5<br>(-1.1) | -1.07<br>(-0.4) |
| HINC | 0.006<br>(1.2) | 0.07<br>(3.3)[a] | 0.01<br>(1.1) | -0.01<br>(-0.6) |
| CAPOP | -0.001<br>(-1.1) | 0.007<br>(1.1) | -0.01<br>(-2.6)[b] | 0.0004<br>(0.1) |

[a] Statistic is significant at 1% level ($P > 0.01$)
[b] Significant at 5% level
[c] Significant at 10% level

Note: West Valley is not included due to missing data. Six other districts are excluded due to missing data on section counts.

Table 5

REGRESSION RESULTS FOR CHANGE IN TOTAL ENROLLMENT FOR THREE YEARS AND EXPLANATORY VARIABLES

| | (1) 1982-83 | (2) 1983-84 | (3) 1984-85 |
|---|---|---|---|
| n | 63 | 63 | 59 |
| $R^2$ | .535 | .812 | .678 |
| F-Ratio | 6.1[a] | 27.4[a] | 10.3[a] |
| Intercept | -1750.6 | -332.2 | -949.5 |
| Regression Coefficients for Explanatory Variables (t-statistics in parentheses) | | | |
| CFEE | -10.21<br>(-0.6) | -32.86<br>(-3.5)[a] | -35.0<br>(-2.5)[b] |
| CCAL | 218.4<br>(0.2) | -1346.9<br>(-2.4)[b] | 1158.6<br>(1.8)c |
| CUNE | -0.28<br>(-1.8)[c] | 0.43<br>(5.1)[a] | 0.25<br>(4.1)[a] |
| CHSG | 5.72<br>(2.0)[b] | 6.47<br>(4.6)[a] | 0.976<br>(1.2) |
| CSEC | 3.57<br>(3.8)[a] | 0.17<br>(0.3) | -0.16<br>(-0.6) |
| PRES | 27.3<br>(0.6) | 38.9<br>(1.3) | 15.9<br>(0.8) |
| RISK | 386.5<br>(1.1) | -310.8<br>(-1.9)[c] | 32.9<br>(0.3) |
| PROX | 6.1<br>(0.8) | -6.11<br>(-1.3) | 2.1<br>(0.6) |
| HINC | 0.04<br>(0.5) | 0.09<br>(2.5)[b] | 0.06<br>(1.4) |
| CAPOP | -0.08<br>(-3.7)[a] | -0.001<br>(-0.1) | 0.011<br>(1.3) |

a statistic is significant at 1% level (P > 0.01)
b significant at 5% level
c significant at 10% level

Note: West Valley is not included due to missing data. Other districts are excluded because of missing data on section counts.

## REFERENCES FOR APPENDIX D


Bishop, J. and J. Van Dyk, "Can Adults Be Hooked on College?" *Journal of Higher Education*. 48: 39-62, January/February 1977.

Chancellor's Office, California Community Colleges. *Report on Noncredit Courses.* Sacramento: the Office, March 1985.

_____. *Analysis of Tuition and Fees.* Sacramento, the Office, December 1981.

McIntyre, C. "Price Elasticity of Demand for Two-Year College Enrollment," paper presented at annual conference of Western Economic Association. Los Angeles, July 1982.

McPherson, M.S. "The Demand for Higher Education," in Brenneman, D., Finn, C., and Nelson, S. *Public Policy and Private Higher Education.* Washington, D.C.: Brookings, 1978.

## APPENDIX E

## STUDY OF FEE IMPACT: PROGRESS REPORT STUDENT SOCIOECONOMICS, 1984 TO 1986

If the new community college enrollment fee authorized by AB 1XX (1984) had an impact on students that was not fully compensated by financial aid, the following effects might have been expected:

(a) losses of low-income and, possibly, middle-income students,
(b) an increase in upper-income students,
(c) possibly fewer self-supporting students, and
(d) possible increases in the working hours and borrowing by students.

Consistent with this argument, data from the Field Research Corporation (FRC) surveys of students before the fee (spring 1984) and after the fee (spring 1985 and spring 1986) shows there was a shift in the proportion of students from lower- and middle-income ranges to the upper-income ranges in the first year after the fee. This pattern reversed itself nominally (not significantly) in year two. Contrary to this argument, however, relatively more students were self-supporting (fewer dependent) during spring 1985, the first year of the fee, than were before. No significant changes were reported in the work patterns of students from the FRC surveys. Borrowing was down slightly in year one, then increased in year two.

### FRC Research Methodology

The data were gathered by means of self-administered questionnaires sent to a sample of students drawn from a sample of 62 colleges. The 62 colleges, as well as procedures for drawing the sample of students, were the same in all three years.

In each year, the sample universe was defined as the "total active enrollment as of the first census," spring term. Each college provided Field Research Corporation (FRC) with a random sample of students derived using a systematic random counting interval. FRC then drew a sample of students stratified by ethnicity.

The initial mailing of the survey was followed up three weeks later by a second mailing to nonresponders. Two additional follow-up efforts were made to all students who did not respond to either mailing. First, the college mailed a letter to nonresponders. Second, following the colleges' efforts, FRC attempted up to four times to reach the remaining nonresponders by telephone to complete the survey by interview. The results for each year were:

| CATEGORY | SAMPLE SIZE | | | RESPONSE RATE (%) | | |
|---|---|---|---|---|---|---|
| | 1984 | 1985 | 1986 | 1984 | 1985 | 1985 |
| TOTAL | 10,247 | 10,691 | 10,474 | 69 | 66 | 62 |
| Nat Amr | 285 | 299 | 331 | 74 | 64 | 64 |
| Asian | 2,072 | 2,126 | 2,098 | 74 | 69 | 64 |
| Black | 2,035 | 2,073 | 2,105 | 61 | 59 | 58 |
| White | 2,471 | 2,707 | 2,576 | 75 | 70 | 67 |
| Hispanic | 2,079 | 2,158 | 2,135 | 65 | 63 | 58 |
| Filipino | 417 | 425 | 434 | 77 | 70 | 69 |
| Other | 332 | 319 | 267 | 66 | 62 | 63 |
| Unknown | 556 | 584 | 528 | 65 | 60 | 57 |

Because a stratified sample plan was used, statistical weights were used to bring each ethnic group back into its proper proportion of total community college enrollment. In addition, it was decided to weight each ethnic group to known academic load distributions (full-time, part-time and noncredit status). The second weight was simply a matter of "fine-tuning" each ethnic sample on a critical variable; the adjustment for academic load was quite small. (A more detailed discussion of the weighting procedures can be found in the Field Research Corporation Reports.)

Because the legislation (AB 1XX) authorizing the mandatory enrollment fee for fall 1984 was enacted in January 1984, it was not possible to use fall data to examine all the pre- and post-fee characteristics of students. Therefore, it was necessary for FRC to collect pre-fee data in spring 1984 and, to maintain continuity, collect post-fee data in spring 1985 and spring 1986. Using Spring, rather than the usual Fall, comparisons raised at least two pertinent research questions.

First, did the use of Fall enrollment distributions for stratifying the Spring sample cause any distortions in the data. Given the sampling and weighting techniques used by FRC, there is no reason to believe that it did. Second, were Spring to Spring changes different than Fall to Fall changes. Spring enrollment characteristics differ from those in the Fall (more students are "continuing," fewer are "first-time," etc.) However, the differences tend to be stable from year to year. Consequently, if the focus of the analysis is on year to year changes (as it is throughout this study), then the conclusions should be valid. Moreover, much of the data on student

characteristics and all of the district-specific aggregates were available for each fall and were used where appropriate.

## Income

The FRC data show an increase in both mean and median incomes of virtually all student groups in the first and second years of the fee (see Table 1). These increases would be expected because of inflation. Income shifts need to be analyzed after the effects of inflation are held constant. Also, it is necessary to examine the income distribution, rather than just measures of central tendency.

Table 1
MEDIAN VALUES OF INCOMES REPORTED
1984, 1985, 1986

| | NATIVE AMERICAN | ASIAN | BLACK | WHITE | HISPANIC | FILIPINO | OTHER |
|---|---|---|---|---|---|---|---|
| SELF SUPPORTING STUDENTS | | | | | | | |
| 1984 | $14,200 | $ 8,000 | $11,500 | $20,200 | $13,600 | $17,500 | $10,900 |
| 1985 | 15,600 | 8,800 | 12,200 | 22,700 | 14,500 | 19,500 | 14,900 |
| 1986 | 17,000 | 10,000 | 13,200 | 23,800 | 14,100 | 20,000 | 18,000 |
| DEPENDENT STUDENTS | | | | | | | |
| 1984 | $26,000 | $14,900 | $18,100 | $30,900 | $18,300 | $24,000 | $23,700 |
| 1985 | 28,100 | 14,900 | 18,000 | 33,600 | 19,000 | 24,300 | 24,500 |
| 1986 | 26,700 | 14,600 | 20,300 | 37,600 | 20,500 | 25,500 | 24,700 |

SOURCE: Field Research Corporation Studies

After adjusting for inflation (personal income per capita in California increased by 9.1% between 1984 and 1985 and by 7.8% between 1985 and 1986), the income distribution shows a statistically significant upward shift in the first year of the fee (see Tables 2 and 3). (Significance is determining by performing a 3X2 Chi-Square ($X^2$) test on the data for 1984 and 1985; 5% is the level of significance used here.)

## Table 2
CHANGES IN MEDIAN AND MEAN INCOME
SELF-SUPPORTING STUDENTS
(FEDERAL DEFINITION)

| CATEGORY | UNADJUSTED | | ADJUSTED* | |
|---|---|---|---|---|
| | MEDIAN | MEAN | MEDIAN | MEAN |
| 1984 | $17,300 | $22,000 | $18,943 | $24,090 |
| 1985 | 19,600 | 24,300 | 19,600 | 24,300 |
| CHANGE | 2,300 | 2,300 | 657 | 210 |
| % CHANGE | 13.3 | 10.5 | 3.5 | 0.9 |
| 1986 | $20,700 | $25,400 | $19,202 | $23,562 |
| 1985-86 CHANGE | 1,100 | 1,100 | -1,498 | -738 |
| % CHANGE | 5.6 | 4.5 | 7.2 | -3.1 |

DEPENDENT STUDENTS
(FEDERAL DEFINITION)

| CATEGORY | UNADJUSTED | | ADJUSTED* | |
|---|---|---|---|---|
| | MEDIAN | MEAN | MEDIAN | MEAN |
| 1984 | $26,000 | $29,300 | $28,470 | $32,084 |
| 1985 | 27,500 | 31,000 | 27,500 | 31,000 |
| CHANGE | 1,500 | 1,700 | 970 | -1,084 |
| % CHANGE | 5.83 | 5.8 | -3.4 | -3.5 |
| 1986 | $29,900 | $32,500 | $27,736 | $30,150 |
| 1985-86 CHANGE | 2,400 | 1,500 | 236 | 150 |
| % CHANGE | 8.7 | 4.8 | 0.9 | 0.5 |

SOURCE: Field Research Corporation Survey Data.

* Student income adjusted for general California increase in per capita income: 1984-85: 9.1%; 1985-86: 7.8% (in 1985 dollars).

The first year shift is particularly significant among White students who are self-supporting (a loss of lower-income students) and among Black students who are dependent upon the incomes of parents or others (a loss of middle-income students).

In the second year of the fee (spring 1986), there was a slight shift back; i.e., a nominal return of lower- and middle-income students. This shift is not statistically significant, however.

Table 3
COMMUNITY COLLEGE STUDENT INCOME
BY ETHNICITY AND DEPENDENCY STATUS
ADJUSTED DATA

| STUDENT INCOME | SELF SUPPORTING | | | PARENT INCOME | DEPENDENT | | |
|---|---|---|---|---|---|---|---|
| | 1984 | 1985* | 1986 | | 1984 | 1985* | 1986 |
| ALL | | | | | | | |
| | % | % | % | | % | % | % |
| $0 $12,000 | 36.0 | 32.8* | 33.1 | $0-$18,000 | 33.8 | 30.6* | 31.5 |
| $12,001-$24,000 | 28.0 | 26.6* | 27.4 | $18,001 $36,000 | 35.2 | 34.2* | 32.2 |
| $24,001 + | 36.0 | 40.6* | 39.5 | >$36,000 | 32.0 | 35.2* | 36.3 |
| HISPANIC | | | | | | | |
| $0 $12,000 | 44.6 | 44.2 | 46.4 | $0-$18,000 | 47.5 | 48.1 | 46.5 |
| $12,001-$24,000 | 26.9 | 26.5 | 28.7 | $18,001 $36,000 | 36.6 | 35.9 | 35.7 |
| $24,001 + | 29.2 | 29.2 | 25.3 | >$36,000 | 15.8 | 16.1 | 17.8 |
| BLACK | | | | | | | |
| $0 $12,000 | 49.6 | 49.5 | 50.0 | $0 $18,000 | 48.3 | 49.8* | 49.0 |
| $12,001-$24,000 | 27.1 | 27.2 | 27.2 | $18,001-$36,000 | 37.3 | 28.3* | 32.7 |
| $24,001 + | 23.2 | 23.3 | 22.8 | >$36,000 | 14.6 | 21.6* | 18.4 |
| WHITE | | | | | | | |
| $0-$12,000 | 28.3 | 24.8* | 24.8 | $0 $18,000 | 22.8 | 18.7 | 19.3 |
| $12,001 $24,000 | 29.8 | 28.2* | 28.8 | $18,001-$36,000 | 35.7 | 35.8 | 31.9 |
| $24,001 + | 41.9 | 47.0* | 46.5 | >$36,000 | 41.4 | 45.5 | 48.6 |
| ASIAN/ PACIFIC ISLANDER | | | | | | | |
| | 61.1 | 60.6 | 59.0 | $0 $18,000 | 56.8 | 56.8 | 61.0 |
| $0 $12,000 | 18.2 | 17.7 | 17.8 | $18,001-$36,000 | 28.3 | 28.2 | 26.2 |
| $12,001 $24,000 | 20.0 | 21.8 | 22.9 | >$36,000 | 14.7 | 14.6 | 12.8 |
| $24,001 + | | | | | | | |

* Proportions are significantly different than prior year, at the $P > .05$ level of significance, using the $X^2$ test.

White students report the highest median incomes, while Asian students report the lowest. Hispanics report marginally higher incomes than do Black students.

### Financial Dependency

Three of five students report they are financially self-supporting. After the fee, there was a slight increase in the proportion of self-supporting students. This shift stabilized during during the fee's second year (see Table 4).

Table 4

| | Percent Self-Supporting | | |
|---|---|---|---|
| | 1984 | 1985 | 1986 |
| All Students | 58.6 | 60.7 | 60.7 |
| Native American | 67.6 | 62.5 | 59.1 |
| Asian | 60.3 | 59.4 | 60.5 |
| Black | 57.5 | 60.7 | 61.1 |
| Filipino | 53.2 | 49.7 | 48.3 |
| Hispanic | 50.1 | 52.3 | 53.3 |
| White | 59.2 | 62.1 | 61.4 |
| Other | 58.0 | 62.2 | 56.8 |

Hispanics and Filipinos are more often dependent than are the other racial and ethnic groups, all of which tend to be generally alike in this regard.

### Financial Aid

Eight percent of the students surveyed by FRC in Spring 1985 report having received the BFAP (see Table 5):

Table 5

| | Percent Receiving BFAP | 1985 Median Income of Group | |
|---|---|---|---|
| | | Self-Supporting | Dependent |
| Native American | 12.8 | $15,600 | $28,100 |
| Asian | 14.1 | 8,800 | 14,900 |
| Black | 17.2 | 12,200 | 18,000 |
| Filipino | 5.1 | 19,500 | 24,300 |
| Hispanic | 10.4 | 14,500 | 19,000 |
| White | 5.5 | 22,700 | 33,600 |
| Other | 11.8 | 14,900 | 24,500 |

Despite this high correlation between low income and financial aid, FRC data show that more than half of those students (enrolled in spring 1985) who were on public assistance did not receive fee waivers even though they were automatically eligible.

Also of concern is a group for which no data are available: those who were in financial need, but received no aid, and as a result, did not enroll.

Six percent of community colleges were on public assistance in the spring 1986. Far more of these students applied for and received BFAP aid than did those students not on public assistance. Among full-time students, half of those on public assistance applied for (and virtually all received) the BFAP (Table 6). Among those full-timers

Table 6
COMMUNITY COLLEGE STUDENTS AND FINANCIAL ASSISTANCE
FULL-TIME STUDENTS[a]

| | ON PUBLIC ASSISTANCE | | | | ALL OTHER | | | |
|---|---|---|---|---|---|---|---|---|
| TYPE OF FINANCIAL AID | DID NOT APPLY | APPLIED AND RECEIVED | APPLIED BUT DID NOT RECEIVE | APPLIED BUT DID NOT RECEIVE ANSWER | DID NOT APPLY | APPLIED AND RECEIVED | APPLIED BUT DID NOT RECEIVE | APPLIED BUT DID NOT RECEIVE ANSWER |
| PELL GRANTS | 33% | 48% | 13% | 6% | 81% | 10% | 7% | 2% |
| CAL GRANTS A, B, C Bilingual Teachers Grant Graduate Fellowship | 79 | 7 | 10 | 44 | 90 | 3 | 5 | 2 |
| GUARANTEED STUDENT LOANS | 86 | 12 | 1 | 1 | 92 | 5 | 2 | 1 |
| BOARD OF GOVERNORS GRANTS AND FEE WAIVERS | 49 | 48 | 1 | 2 | 91 | 7 | 1 | 1 |
| INSTITUTIONAL AID (SEOG, EOP, EOPS, NDSL, CWS, etc.) | 56 | 32 | 7 | 5 | 89 | 6 | 3 | 2 |
| OTHER | 88 | 7 | 3 | 2 | 96 | 2 | 1 | 1 |

SOURCE: Field Research Corporation Survey, Spring 1986.

[a] Full time is defined here as those students taking nine or more units.

not on public assistance, only one of ten applied. Relatively few part-time students apply for any kind of aid (Table 7.)

## Work

There don't appear to be any significant shifts in the proportion of students who worked during the three years of FRC surveys (Table 8).

Since students responding to the FRC survey did not increase their work appreciably from before the fee to after the fee, it appears that few students reduced their academic load so as to work more to pay the fee. (Though, as we see below, a number

Table 7
COMMUNITY COLLEGE STUDENTS ANDFINANCIAL ASSISTANCE
PART-TIME STUDENTS[a]

| TYPE OF FINANCIAL AID | ON PUBLIC ASSISTANCE | | | | ALL OTHER | | | |
|---|---|---|---|---|---|---|---|---|
| | DID NOT APPLY | APPLIED AND RECEIVED | APPLIED BUT DID NOT RECEIVE | APPLIED BUT DID NOT RECEIVE ANSWER | DID NOT APPLY | APPLIED AND RECEIVED | APPLIED BUT DID NOT RECEIVE | APPLIED BUT DID NOT RECEIVE ANSWER |
| PELL GRANTS | 81% | 11% | 5% | 3% | 96% | 2% | 1% | 1% |
| CAL GRANTS A, B, C Bilingual Teachers Grant Graduate Fellowship | 90 | 5 | 1 | 44 | 97 | 1 | 1 | 1 |
| GUARANTEED STUDENT LOANS | 91 | 8 | 1 | 0 | 98 | 2 | 0 | 0 |
| BOARD OF GOVERNORS GRANTS AND FEE WAIVERS | 68 | 31 | 1 | 0 | 98 | 2 | 0 | 0 |
| INSTITUTIONAL AID (SEOG, EOP, EOPS, NDSL, CWS, etc.) | 92 | 5 | 2 | 1 | 988 | 1 | 1 | 0 |
| OTHER | 96 | 2 | 1 | 0 | 98 | 2 | 0 | 0 |

SOURCE: Field Research Corporation Survey, Spring 1986.

[a] Part-time is defined here as those students taking fewer than nine units.

Table 8

| | Percent Who Worked | | |
|---|---|---|---|
| | 1984 | 1985 | 1986 |
| All Students | 78.4% | 78.4% | 79.0% |
| Native American | 75.1 | 74.4 | 78.4 |
| Asian | 69.6 | 68.3 | 69.8 |
| Black | 71.4 | 74.8 | 73.4 |
| Filipino | 75.9 | 77.0 | 81.9 |
| Hispanic | 78.2 | 79.6 | 77.4 |
| White | 81.7 | 80.7 | 81.9 |
| Other | 74.9 | 71.1 | 74.6 |

of students appear to have reduced their load to avoid the fee.) This does not indicate, however, the number of students who, with more financial aid, would work less and increase their academic load.

In general, White students work the most, Asians the least. Of every five community college students:

two are employed full-time (work 40 or more hours per week)
two are employed part-time
one is not employed

The typical student works 29 hours per week. As expected, those students who enroll part-time and are self-supporting work the most (Table 9). However, three of four students who report they are financially dependent and enrolled full-time indicate that they work.

Table 9
PERCENT WHO WORKED, 1985

| Enrollment | Dependent | Self-Supporting |
|---|---|---|
| Full-Time | 76.1 | 69.0 |
| Part-Time | 80.9 | 83.7 |
| Non-Credit | 69.0 | 61.3 |

## Borrowing

The FRC surveys shows that student borrowing declined in the year following the fee, then increased slightly in year two (Table 10).

Table 10
PERCENT OF STUDENTS WHO BORROWED

| 1984 | 1985 | 1986 |
|---|---|---|
| 17.0 | 14.8 | 15.1 |

While this might appear contrary to expectations about the fee's impact (more borrowing to pay for the fee), it may instead simply be a reflection of the loss in low-income students.

## Socioeconomic Differences Between Black and Hispanic Students

While Black and Hispanic students report similar incomes and might have been expected to react in parallel fashion to any increase in cost, they did not. It appears from other evidence in this study, that Blacks reacted more strongly to the fee -- though both Blacks and Hispanics appear to have reacted to improving employment conditions. As the economy improved in 1984, both groups went back to work and fewer enrolled.

The difference in Black and Hispanic response to the new fee may be explained in part by differences in the population growth rates (Table 11).

Table 11
CALIFORNIA ADULT POPULATION
ESTIMATED GROWTH RATES
1980 to 1985

| | |
|---|---|
| Total | 10.0% |
| Asian | 25.5 |
| Black | 11.2 |
| Hispanic | 28.1 |
| White | 3.6 |

SOURCE: Center for the Continuing Study of the California Economy, Palo Alto, 1986.

Differences in the college-going preferences of the two groups also may be explained by the socioeconomic differences of the two groups. It may be that Black students had a greater economic need and, perhaps, ability to enter the job market in 1984, rather than continue their education and that the fee forced that decision.

FRC data show that, compared to Hispanic students, Black students are more often self-supporting and on public assistance, but fewer are employed and their reported incomes are lower while enrolled (see Table 12). Black students also are slightly older, more often female, and generally report having more prior education than Hispanic students. While similar proportions of both Black and Hispanic students are enrolled for occupational training, more Black students are enrolled to transfer and more Hispanics are enrolled for basic language and learning skills.

Table 12
STUDENT CHARACTERISTICS
BLACK AND HISPANIC STUDENTS
1985

| Category | Black | Hispanic |
|---|---|---|
| Percent Self-Supporting | 62.2 | 52.8 |
| Percent on Public Assistance | 13.2 | 6.3 |
| Percent Working | 74.8 | 79.6 |
| Average Income | | |
| Dependent | $ 18,000 | $ 19,000 |
| Self-Supporting | 12,200 | 14,500 |
| Median Age | 26 | 25 |
| Percent Female | 58.4 | 50.8 |
| Percent With 31 or More Units | 40.8 | 33.7 |
| Objectives (percent distribution) | | |
| Transfer | 35.2 | 30.3 |
| Occupational | 50.3 | 49.3 |
| Basic Skills | 6.1 | 10.6 |
| Other | 9.2 | 9.7 |

SOURCE: Field Research Corporation Survey, Spring 1985.

## APPENDIX F

## STUDY OF FEE IMPACT: PROGRESS REPORT
## FEE ADMINISTRATION

AB 1XX (1984) requires the Chancellor of the California Community Colleges to study the impact of a new enrollment fee on, among other things:

> "...Changes in the staff requirements and costs of administration (of the fee)."

This bill established a mandatory enrollment fee to be charged to all students enrolled for credit, abolished ten (of over twenty) permissive fees, and established a program of state student financial aid to be administered by the Board of Governors and by local districts (BFAP).

Aside from managing fee deferrals, an activity new to districts, it was not clear that trading several permissive fees that were charged to certain students for one general enrollment fee to be charged to all credit students (though at differing rates, depending upon academic load) would generate any substantial increase in staff workload or in budget requirements. By contrast, administering the financial aid clearly was an added workload for district financial aid and business offices, however, and is discussed elsewhere in this report.

Under the provisions of AB 1XX, 2% of fee revenues were to be retained by each district and, while unrestricted in their use, the intent was that these revenues be used to meet the costs incurred in collecting and managing the fee -- an administrative allowance.

It is estimated that the 2% feature produced $1.4 million in revenues that were retained by the districts in 1984-85. This amounted to just over $13,000 per college.

A fall 1986 survey of college personnel by the Chancellor's Office obtained responses from 63 of 106 colleges and shows that:

(a) Fees were collected by
- three of nine colleges in their admissions offices
- three of nine colleges in their business offices
- two of nine colleges in both their business and admissions office
- one of nine colleges in other locations

(b) Of every eight students,
- six paid in person
- one paid by mail, with their registration materials
- one had fees deferred or paid through the BFAP

(c) Two thirds of the colleges responding feel that the new enrollment fee caused longer registration lines than before; half of the above (one-third of all colleges) feel that the longer lines caused some students not to enroll

(d) Nine of ten colleges either changed or established new procedures to collect the new enrollment fee

three-fifths of all colleges required additional staffing for this purpose

(e) One half of the colleges feel that start-up costs for collecting the new enrollment fee were substantial

Three of five colleges feel that the ongoing costs of administering the new fee will exceed the costs of administering the prior fees.

Table 1 displays the costs that were estimated by college staff responding to the survey:

Table 1
Average Cost of Fee Collection Per College

| | 1983-84 | 1984-85 | 1985-86 |
|---|---|---|---|
| Total | $12,410 | $36,993 | $29,053 |
| Added | | 24,583 | 16,643 |

Colleges added 0.6 FTE staff, on the average, to help administer the new fee.

The estimated ongoing additional cost is slightly greater than what the 2% cost allowance may provide in revenues.

More specific responses to the questionnaire are contained in Tables 2 through 7.

Table 2
CHANGES IN ENROLLMENT FEE COLLECTION PROCESS
BEGINNING FALL 1984 TERM

| TYPE OF CHANGE | PERCENT OF COLLEGES | NUMBER OF COLLEGES |
|---|---|---|
| No Substantial Change in Process | 15.9 | 10 |
| Process Continued with Substantial Changes | 30.2 | 19 |
| Same Process for Optional Fees, New Process Established to Collect the Enrollment Fee | 15.9 | 10 |
| Existing Process Eliminated, and a Totally New Process Established | 38.0 | 24 |

Table 3
CHANGES IN EXISTING FUNDING FOR FEE COLLECTION PROCESS
SO AS TO IMPLEMENT COLLECTION OF ENROLLMENT FEE
BEGINNING FALL 1984 TERM

| TYPE OF CHANGE | PERCENT OF COLLEGES | NUMBER OF COLLEGES |
|---|---|---|
| No Change in Staffing or Funding Levels | 39.7 | 25 |
| More Staff or Funding RequireD | 60.3 | 38 |

Table 4
ENROLLMENT FEE COLLECTION SITE
FALL 1984

| LOCATION | PERCENT OF COLLEGES | NUMBER OF COLLEGES |
|---|---|---|
| Admissions Office | 31.8 | 20 |
| Business Office | 33.4 | 21 |
| Admissions and Business Office | 22.3 | 14 |
| Other | 12.5 | 8 |

Table 5
METHOD OF PAYMENT OF ENROLLMENT FEE
FALL 1984

| METHOD OF PAYMENT | ESTIMATED PERCENT OF STUDENTS |
|---|---|
| Check or Money Order or Registration by Mail | 13 |
| Payment in Person to Business Office Cashier | 37 |
| Payment in Person to Admissions and Records Cashier | 34 |
| Fee Deferred at Time of Enrollment and Collected Later | 6 |
| Fee Deferred at Time of Enrollment and Never Collected | 1 |
| Fee Paid by Board Financial Aid Program | 2 |

Table 6
IMPACT OF NEW ENROLLMENT FEE COLLECTION PROCESS
ON LENGTH OF LINES AND COMPLETION OF ENROLLMENT

| IMPACT | PERCENT OF COLLEGES | NUMBER OF COLLEGES |
|---|---|---|
| Longer Lines at Registration | 66.7 | 42 |
| Students Abandoned Registration due to Length of Lines | 39.7 | 25 |

Table 7
COST IMPACT ON DISTRICT ATTRIBUTABLE TO
COLLECTING THE NEW ENROLLMENT FEE

| NATURE OF IMPACT | PERCENT OF COLLEGES | NUMBER OF COLLEGES |
|---|---|---|
| Substantial Start-up Cost | 30.1 | 19 |
| Substantial Start-up Costs and Increase in Cost for Staffing and Support | 23.8 | 15 |
| Start-up Costs not Substantial | 17.5 | 11 |
| Increase in Ongoing Costs for Staffing and Support | 19.0 | 12 |
| No Change in Ongoing Costs | 9.6 | 6 |



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